

FILE HISTORY

US 6,199,077

PATENT: 6,199,077

INVENTORS: Inala, Suman Kumar  
Rangan, P Venkat  
Satyavolu, Ramakrishna

TITLE: Server-side web summary generation  
and presentation

APPLICATION NO: US1999323598A

FILED: 01 JUN 1999

ISSUED: 06 MAR 2001

COMPILED: 30 MAR 2011



6,199,077

**SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION  
TRANSACTION HISTORY**

Date	Transaction Description
6/9/1999	Initial Exam Team nn
6/23/1999	IFW Scan & PACR Auto Security Review
6/28/1999	Application Dispatched from OIPE
7/8/1999	Transfer Inquiry
7/12/1999	Transfer Inquiry
9/2/1999	Case Docketed to Examiner in GAU
12/16/1999	Conversion under Rule 45
1/7/2000	Workflow - File Sent to Contractor
7/17/2000	Non-Final Rejection
7/19/2000	Mail Non-Final Rejection
9/5/2000	Response after Non-Final Action
9/7/2000	Date Forwarded to Examiner
10/6/2000	Case Docketed to Examiner in GAU
11/20/2000	Examiner Interview Summary Record (PTOL - 413)
11/21/2000	Mail Notice of Allowance
11/21/2000	Notice of Allowance Data Verification Completed
11/28/2000	Workflow - Drawings Finished
11/28/2000	Workflow - Drawings Matched with File at Contractor
11/28/2000	Workflow - Drawings Received at Contractor
11/28/2000	Workflow - Drawings Sent to Contractor
11/29/2000	Issue Fee Payment Verified
12/12/2000	Workflow - Complete WF Records for Drawings
1/9/2001	Application Is Considered Ready for Issue
2/15/2001	Issue Notification Mailed
3/6/2001	Recordation of Patent Grant Mailed
4/26/2001	Miscellaneous Incoming Letter
12/23/2002	Post Issue Communication - Certificate of Correction

PATENT APPLICATION



09323598

JUL 28 9 11 AM '99 PTO

09/323598

INJUL 31 7 99 351

CONTENTS

	Date received (Incl. C. of M.) or Date Mailed		Date received (Incl. C. of M.) or Date Mailed
1. Application <u>6</u> papers.		42.	
2. Pat. 148 (Conversion Paper)	12-16-99	43.	
3. <u>100</u> <u>500</u> <u>reg. 3.2</u>	7-19-00	44.	
4. Pat. Make Special - infringement	7-20-00	45.	
5. Amended	9-5-00	46.	
6. Change of address	9-1-00	47.	
7. <u>11-20-00</u> Interview summary		48.	
8. <u>11-20-00</u> Allowance Amended	11/21/00	49.	
9. <u>11-20-00</u> Formal Drawings (5 sheets)	11-28-00	50.	
10. <u>11-20-00</u> LTR	4-26-01	51.	
11. Reg. Conf	3-20-01	52.	
12. Directors Report	10/24/2002	53.	
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41.		82.	



ISSUE SLIP STAPLE AREA (for additional cross references)

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION	NW	76534	06-14-99
O.I.P.E. CLASSIFIER			7-6-99
FORMALITY REVIEW	DMK	69167	6-28-99

INDEX OF CLAIMS

- ✓ ..... Rejected
- ✗ ..... Allowed
- (Through numeral)... Canceled
- + ..... Restricted
- N ..... Non-elected
- I ..... Interference
- A ..... Appeal
- O ..... Objected

Claim			Date
1	Final	Original	
2	2	✓	7/14/00
3	3	✓	
4	4	✓	
5	5	✓	
6	6	✓	
7	7	✓	
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9	9	✓	
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If more than 150 claims or 10 actions  
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## SEARCHED

Class	Sub.	Date	Exmr.
707	501	7/12/00	MGP
707	513	7/13/00	MGP
Updates Above		11/13/00	JF
707	1	↓	↓
	3		
	4		
	5		
	9-10		
713	<del>201</del> 201-202		
705	26-27		
709	202		
↓	218		
704	1		


## INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.
767	501	11/20/00	JF
709	202	↓	↓
713	218		
	202		
704	1		

## SEARCH NOTES (INCLUDING SEARCH STRATEGY)

WEST 2.0 (USPAT) Internet See Inserts	Date	Exmr.
	11/13/00	JF
	↓	↓

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Results for    Search within these results

Date:  Before  on  June  1998

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**Search Partners**

- Find "[gathering agent](#)" at Travelocity.
- Get expertise on "[gathering agent](#)" at InfoRocket.com
- Get Free newsletters on "[gathering agent](#)" topics from Themestream.

**WEB RESULTS** more than 100 **1 - 10** [next >>](#)

- 1. BIG: A Resource-Bounded Information Gathering Agent**  
 BIG: A Resource-Bounded Information Gathering Agent  
 1/26/1998 <http://dis.cs.umass.edu/research/big/big.html>  
 See results from [this site only](#).
- 2. Software agents mailing list archive: information gathering agent available**  
 information gathering agent available Hui Guo ( [Hui.Guo@gmd.de](mailto:Hui.Guo@gmd.de) )  
 Thu, 19 Dec 1996 22:19:26 0100 Messages sorted by: [ date ] [ thread ] [ subject ] [ author ] Next message: Yvan Cloutier;  
 "searching in plain-text mode from a predetermined number of  
 12/20/1996 <http://www.cs.umbc.edu/agentslist/archive/1996b/0141.html>  
 See results from [this site only](#).
- 3. Agent or Program**  
 Paper on the nature of autonomous agents. Discusses the differences between an agent and an ordinary program.  
 6/19/1996 <http://www.mscl.memphis.edu/~franklin/AgentProg.html>  
 See results from [this site only](#).
- 4. Observed behaviors and agent decision rules**  
 Observed behaviors and agent decision rules  
 11/13/1998 [http://www-iluf.unifr.ch/pai/axe/AmocPapers/eccs/eccs\\_html/node7.html](http://www-iluf.unifr.ch/pai/axe/AmocPapers/eccs/eccs_html/node7.html)  
 See results from [this site only](#).
- 5. AAAI98**  
 Adaptive Agents for Information Gathering from Multiple, Distributed Information Sources Yizhong Fan\* Susan Gauch \*Motorola, Inc. Department of Electrical Engineering and Computer Science Contact Information Electrical Engineer  
 11/25/1998 <http://www.tisl.ukans.edu/~sgauch/papers/AAAI99paper.html>  
 See results from [this site only](#).
- 6. A prototype agent to assist shoppers**  
 A prototype agent to assist shoppers Robert Inder a , Matthew Hurst b and Toshikazu Kato c a NEDO I.T. Researcher/ETL, Electrotechnical



Laboratories, Umezono 1-1-4, Tsukuba, Ibaraki 305, Japan  
inder@etl.go.jp b ETL, Electrotechnical Laboratories, Um  
3/25/1998 <http://www.webct-net.ethz.ch/WWW7/1856/com1856.htm>  
See results from [this site only](#).

**7. Untitled Document**

ARCHITECTURE DivaSystem's architecture DivaSystem is a database system composed of one common database to be shared within the business group, and four other functional groups used for utilizing this database. Information Gathering Ag  
1/27/1998 [http://www.diva.co.jp/us/DIVA\\_E\\_Architecture.html](http://www.diva.co.jp/us/DIVA_E_Architecture.html)  
See results from [this site only](#).

**8. A prototype agent to assist shoppers**

A prototype agent to assist shoppers Robert Inder a , Matthew Hurst b and Toshikazu Kato c a NEDO I.T. Researcher/ETL, Electrotechnical Laboratories, Umezono 1-1-4, Tsukuba, Ibaraki 305, Japan  
inder@etl.go.jp b ETL, Electrotechnical Laboratories, Um  
3/23/1998 <http://www7.scu.edu.au/programme/posters/1856/com1856.htm>  
See results from [this site only](#).

**9. DBLP: Bryan Horling**

Bryan Horling List of publications from the DBLP Bibliography Server Victor R. Lesser , Bryan Horling, Frank Klassner , Anita Raja , Thomas Wagner , Shelley XQ. Zhang : BIG: A Resource-Bounded Information Gathering Agent. AAI/IAAI 1998 : 539-546 D  
5/3/1999 <http://sunsite.ust.hk/dblp/db/indices/a-tree/h/Horling:Bryan.html>  
See results from [this site only](#).

**10. Proc. of MACC'97 Contents**

Proc. of MACC'97 Contents  
2/2/1998 <http://www.kecl.ntt.co.jp/csl/msrg/events/macc97/contents-e.html>  
See results from [this site only](#).

**1 - 10 next >>**

**SECOND OPINION**

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WEB RESULTS 1,900 Matches 1 - 10 next >>

Get the **Top 3 sites for ""search engine" agent authenticate"**

- 1. Inside the Cisco Centri Firewall**  
 Table of Contents Inside the Cisco Centri Firewall Introduction Security Subsystem Security Kernel The Interceptor and Packet Analyzer The Security Verification Engine Kernel Proxies Controlled Host Component and Communications Channels Logging Agen  
 12/20/1997 <http://www.cisco.com/univercd/cc/td/doc/product/laabu/centri4/user/scf4ch5.htm>  
 See results from [this site only](#).
- 2. How to use findo to get more relevant search results - faster**  
 How to use findo to get more relevant search results - faster! This page provides help and tutorial information explaining how more relevant search results can be achieved by using Findo! the fast free search agent which is the fastest and sim  
 2/24/1999 <http://findo.net/registration/finding.htm>  
 See results from [this site only](#).
- 3. <http://mwcnet.mwc.edu/gw/guides/tshoot/TB100001.html>**  
 Use your browser's search feature to locate a GroupWise error code or message text. If you cannot locate the error you have received, see Technical Services 0xxx Errors Ranges: 000x , 001x , 002x , 003x , 004x , 005x , 006x , 010x 000x GroupWise  
 8/25/1997 <http://mwcnet.mwc.edu/gw/guides/tshoot/TB100001.html>  
 See results from [this site only](#).
- 4. Novell GroupWise 5.5 Troubleshooting Guide Book 1: Error Messages**  
 Use the Find feature on your browser's Edit menu to locate a GroupWise ® error code or message text. If the error you received is not in the list below, standard solutions are not yet available. For technical services, see Novell ® Su  
 3/27/1998 <http://hscs.unm.edu/helpdesk/GWDoc/tb100001.htm>  
 See results from [this site only](#).
- 5. Chapter 4: Mobility and Mobile Agent Systems**  
 [Top] [Back] [Next] [Bottom] 4 Mobility and Mobile Agent Systems One doesn't discover new lands without consenting to lose sight of the shore for a very long time - Andrew Gide 4.1 Introduction The advent and rapid development of the Internet has  
 6/17/1998  
<http://www.cosm.ecs.soton.ac.uk/publications/archive/dale1997a/html/papers/chapter4.htm>  
 See results from [this site only](#).

**6. An Integrated System for Distributed Information Services**

An Integrated System for Distributed Information Services George H. Brett II  
Internet Consultant, Boulder Public Library Instructor, University of Colorado  
at Boulder ghb@colorado.edu D-Lib Magazine , December 1996 ISSN  
1082-9873 Abstract 1.0  
3/8/1999 <http://www.dlib.org/dlib/december96/dipps/12brett.html>  
See results from [this site only](#).

**7. Henry and Gerrelt's master assignment: Message Processing Analysis**

Message Processing Analysis To be able to implement the SNMPv3 protocol,  
an analysis had to be made of how it processes messages. The next chapters  
explain how the different modules process their part of an SNMPv3 message.  
Because no information e  
4/20/1998  
[http://snmp.cs.utwente.nl/Docs/nm/research/projects/laforge/assignment/prot\\_op/prot\\_op.htm](http://snmp.cs.utwente.nl/Docs/nm/research/projects/laforge/assignment/prot_op/prot_op.htm)  
See results from [this site only](#).

**8. (IPng 1118) Re: ND Asst for Security Issue for DHCPv6?**

[Prev] [Next] [Index] [Thread] (IPng 1118) Re: ND Asst for Security Issue for  
DHCPv6? To : Ran Atkinson < rja@cisco.com > Subject : (IPng 1118) Re: ND  
Asst for Security Issue for DHCPv6? From : "Thomas Narten" <  
narten@VNET.IBM.COM > Date: Fri, 12  
12/5/1996 <http://www.wcu.edu/llsts/ipng/199601/msg00133.html>  
See results from [this site only](#).

**9. The Simple Times, Volume 4, Number 1, January, 1996**

The Simple Times The Quarterly Newsletter of SNMP Technology, Comment,  
and Events (sm) Volume 4, Number 1 January, 1996 The Simple Times (tm)  
is an openly-available publication devoted to the promotion of the Simple  
Network Management Protocol. In e  
3/6/1996 <http://www.simple-times.org/pub/simple-times/issues/4-1.html>  
See results from [this site only](#).

**10. The V6 Engine**

The V6 Engine Bernard Lang and François Rouaix INRIA March 14, 1996  
Submitted to the WWW5 Workshop: Programming the Web - in search for  
APIs Abstract : WWW browsers may be seen as the composition of a  
multimedia interface, and a set of intern  
4/15/1996 <http://www.cs.vu.nl/~eliens/WWW5/papers/V6>  
See results from [this site only](#).

1 - 10 [next >>](#)  
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HotBot results: "search engine" agent

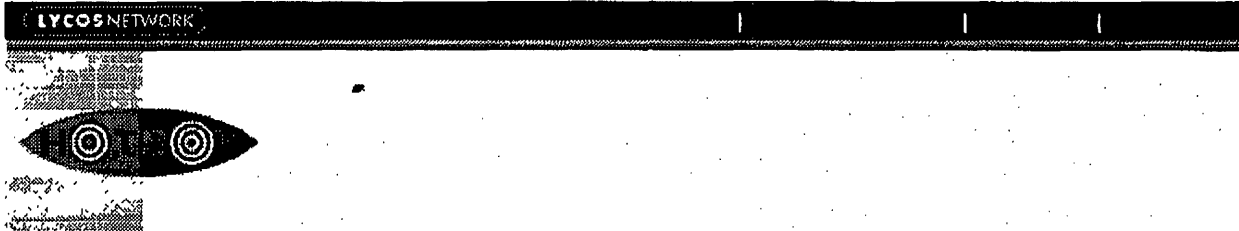
wysiwyg://179/http://hotbot.lycos.com/?...D=2&TR=63772&AM1=MC&date=range&x=41&y=5



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- Shop: Find the lowest prices for "spider "user profile"" at DealTime.com.
  - For reviews and prices on "spider "user profile"" go to CNET.com.
  - Find "spider "user profile"" resources at AllBusiness.com.

WEB RESULTS 1,300 Matches 1 - 10 [next >>](#)

Get the **Top 10 sites for "spider "user profile""**

- 1. [Class spider.access.CSpSecurityGradient](#)**  
 All Packages Class Hierarchy This Package Previous Next Index Class  
 spider.access.CSpSecurityGradient java.lang.Object | ---- spider.CSpFileBased |  
 ---- spider.access.CSpSecurity | ---- spider.access.CSpSecurityJa  
 4/9/1998  
<http://www.netdynamics.com/support/manuals/nd31/javadoc/spider.access.CSpSecurityGradient.html>  
 See results from [this site only](#).
- 2. [WINDOWS NT LIST - October 1996 Archives: Re: Hidding Folders](#)**  
 Re: Hidding Folders  
 12/16/1998 <http://mlarchive.ima.com/winnt/1996/Oct/1718.html>  
 See results from [this site only](#).
- 3. [RADIUS Authentication Billing Manager Administrator's Guide](#)**  
 The RADIUS Authentication Billing Manager (RADIUS ABMTM) Administrator's  
 Guide provides instructions for configuring and using RADIUS ABM. This guide  
 covers RADIUS ABM 1.0.  
 5/7/1998 [http://docs.msstate.edu/lucent/RABM/appendixD\\_attrib.fm.html](http://docs.msstate.edu/lucent/RABM/appendixD_attrib.fm.html)  
 See results from [this site only](#).
- 4. <http://www.4w.com/reports/browsers.html>**  
 Most Widely Used Browsers and Platforms Information Analytics The Internet  
 Marketing Specialists This report was generated from log files for approximately  
 100 websites over a 30 day period. When designing websites, it's important to  
 know what feat  
 4/24/1999 <http://www.4w.com/reports/browsers.html>  
 See results from [this site only](#).
- 5. [http://webstats.intensive.net/ozannes/REPORT\\_b.htm](http://webstats.intensive.net/ozannes/REPORT_b.htm)**  
 Ozannes Real Time General Statistics The User Profile by Regions graph identifies  
 the general location of the visitors to your Web site. The General Statistics table  
 includes statistics on the total activity for this server during the designated tim  
 9/3/1998 [http://webstats.intensive.net/ozannes/REPORT\\_b.htm](http://webstats.intensive.net/ozannes/REPORT_b.htm)  
 See results from [this site only](#).



**6. [http://www.cod.edu/reports/COMPLETE\\_b.htm](http://www.cod.edu/reports/COMPLETE_b.htm)**

Complete Report COD Weekly log profile General Statistics The User Profile by Regions graph identifies the general location of the visitors to your Web site. The General Statistics table includes statistics on the total activity for this server duri 2/9/1999 [http://www.cod.edu/reports/COMPLETE\\_b.htm](http://www.cod.edu/reports/COMPLETE_b.htm)  
See results from [this site only](#).

**7. [Course CIS 700/002 - Project list](#)**

Project Ideas These project ideas should be discussed with the instructors before the project is commenced. The goal of a project is to create a tool, observe its performance and write it up, hopefully for publication. Projects are added regularly.  
2/2/1999 <http://www.neci.nj.nec.com/homepages/giles/course/projects/projects.html>  
See results from [this site only](#).

**8. [FocuSearch -Search Engine Technologies](#)**

FocuSearch centralizes highly specific, hard to find information that is scattered across the Internet  
4/9/1999 <http://www.focusearch.com/solution.html>  
See results from [this site only](#).

**9. [Intelligent Searching Agents on the WWW](#)**


Intelligent Searching Agents on the Web In the Search Engines column for this issue, Tracey Stanley describes Web-based Intelligent Searching Agents, and takes a closer look at a few examples you may wish to play with. What are Intelligent Sear  
3/19/1997 <http://www.ariadne.ac.uk/issue7/search-engines>  
See results from [this site only](#).

**10. [Troubleshooting RADIUS](#)**

[Top] [Table Of Contents] [Prev] [Next] [Index] 13 out of 18 total pages  
Troubleshooting RADIUS A This appendix provides hints and tips for troubleshooting the RADIUS authentication server and the RADIUS accounting server. Troubleshoot  
2/26/1999 <http://lb.daemon.am/Manuals/PortMaster/radius/troublesht.html>  
See results from [this site only](#).

1 - 10 [next >>](#)

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US-PAT-NO: 5974481  
DOCUMENT-IDENTIFIER: US 5974481 A

TITLE: Method for estimating the probability of collisions of fingerprints

DATE-ISSUED: October 26, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Broder; Andrei Zary	Menlo Park	CA	N/A	N/A

US-CL-CURRENT: 710/49; 707/513, 707/524, 710/68

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	RWMC	Draw Desc	Image
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29. Document ID: US 5966704 A

L7: Entry 29 of 46 File: USPT Oct 12, 1999

US-PAT-NO: 5966704  
DOCUMENT-IDENTIFIER: US 5966704 A

TITLE: Storage plane organization and storage systems based thereon using queries and subqueries for data searching

DATE-ISSUED: October 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Furegati; Rene Anton	Zurich	N/A	N/A	CHX
Schneider; Heinrich	Zurich	N/A	N/A	CHX
Streckeisen; Heinrich Adolf	Wettswil	N/A	N/A	CHX Anandan

US-CL-CURRENT: 707/3; 707/4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	RWMC	Draw Desc	Image
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30. Document ID: US 5966711 A

L7: Entry 30 of 46 File: USPT Oct 12, 1999

US-PAT-NO: 5966711  
DOCUMENT-IDENTIFIER: US 5966711 A

TITLE: Autonomous intelligent agents for the annotation of genomic databases

DATE-ISSUED: October 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Adams; R. Mark	Natick	MA	N/A	N/A

US-CL-CURRENT: 707/104; 707/200

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	TMAC	Draw Desc	Image
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Generate Collection

Term	Documents
(5 SAME 2).USPT.	46

Display  Documents, starting with Document:

Display Format:



US006199077B1

(12) **United States Patent**  
Inala et al.

(10) **Patent No.:** US 6,199,077 B1  
(45) **Date of Patent:** Mar. 6, 2001

(54) **SERVER-SIDE WEB SUMMARY  
GENERATION AND PRESENTATION**

6,041,326 \* 3/2000 Amro et al. .... 707/10  
6,108,686 \* 8/2000 Williams, Jr. .... 709/202  
6,119,101 \* 9/2000 Peckover ..... 705/10 X

(75) **Inventors:** Suman Kumar Inala, Santa Clara; P Venkat Rangan, San Diego; Ramakrishna Satyavolu, Santa Clara, all of CA (US)

**OTHER PUBLICATIONS**

Stanley, Tracey, "Intelligent Searching Agents on the Web", 4 pages, <http://www.ariadne.ac.uk/issu7/search-engines/> Jan. 1997.\*

(73) **Assignee:** Yodlee.com, Inc., Sunnyvale, CA (US)

Jansen, James, "Using an Intelligent Agent to Enhance Search Engine Performance", 16 pages, <http://www.firstmonday.dk/issues/issue2\_3/jansen/> Dec. 1998.\*

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Lesser, Victor et al, "BIG: A Resource\_Bounded Information Gathering Agent", 14 pages, <http://dis.cs.umass.edu/research/big/> Jan. 1998.\*

\* cited by examiner

(21) **Appl. No.:** 09/323,598

(22) **Filed:** Jun. 1, 1999

*Primary Examiner*—Joseph H. Feild

**Related U.S. Application Data**

(74) *Attorney, Agent, or Firm*—Donald R. Boys; Central Coast Patent Agency

(63) Continuation-in-part of application No. 09/208,740, filed on Dec. 8, 1998.

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(52) **U.S. Cl.** ..... 707/501; 709/202; 709/218; 713/202; 704/1

(58) **Field of Search** ..... 707/501, 513, 707/1, 3, 4, 5, 9-10; 713/201-202; 705/26-27; 709/202, 218; 704/1

(57) **ABSTRACT**

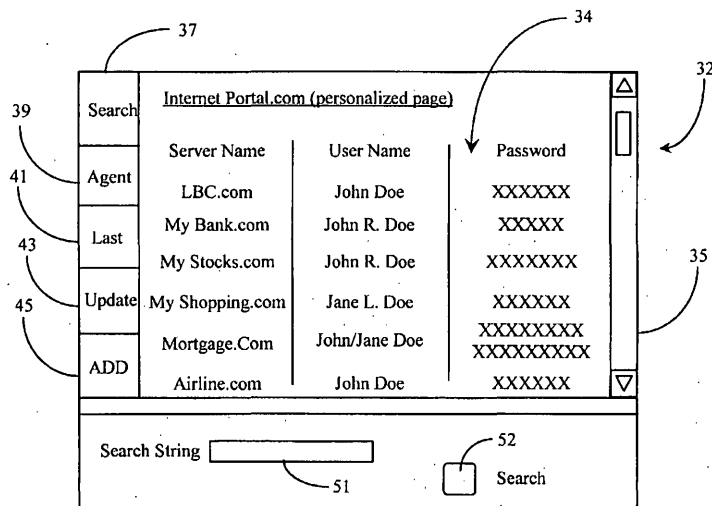
A portal server includes a software agent configured to do summary searches for subscribers based on Internet destinations provided by the subscribers, to retrieve information from such destinations based on pre-programmed site information, and to download the summary information to the subscriber. The destinations and the nature of the information to be retrieved is pre-programmed. There is further a configuration and initiation interface for a subscriber to set up and start a summary search. In some cases the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server. Also in some cases retrieved information is immediately sent to the subscriber, and in other situations such information is saved at the portal to be retrieved by a subscriber at a later time. In preferred embodiments of the invention autologins are accomplished for a subscriber at Internet destinations by use of pre-stored configuration information.

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**12 Claims, 6 Drawing Sheets**



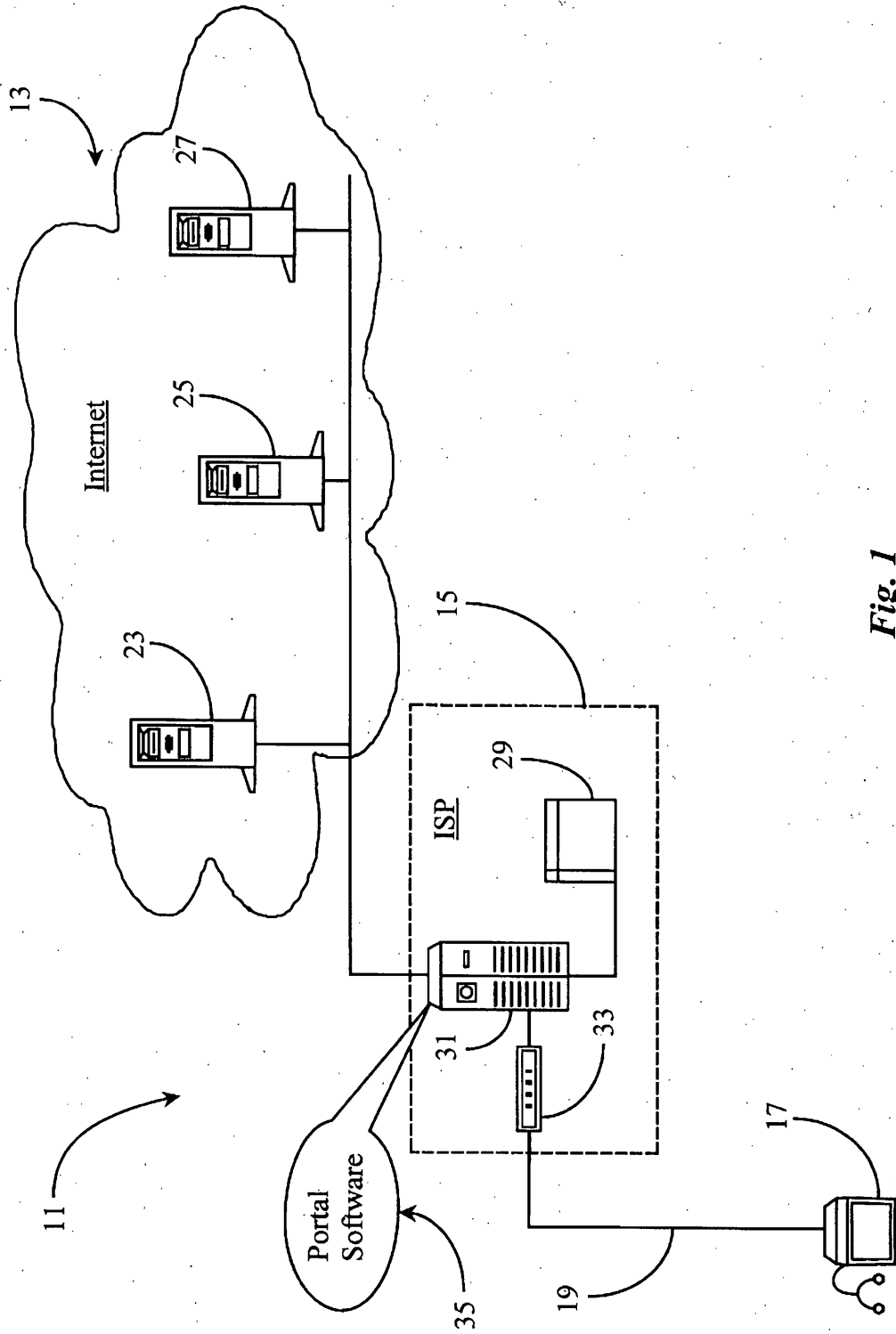


Fig. 1

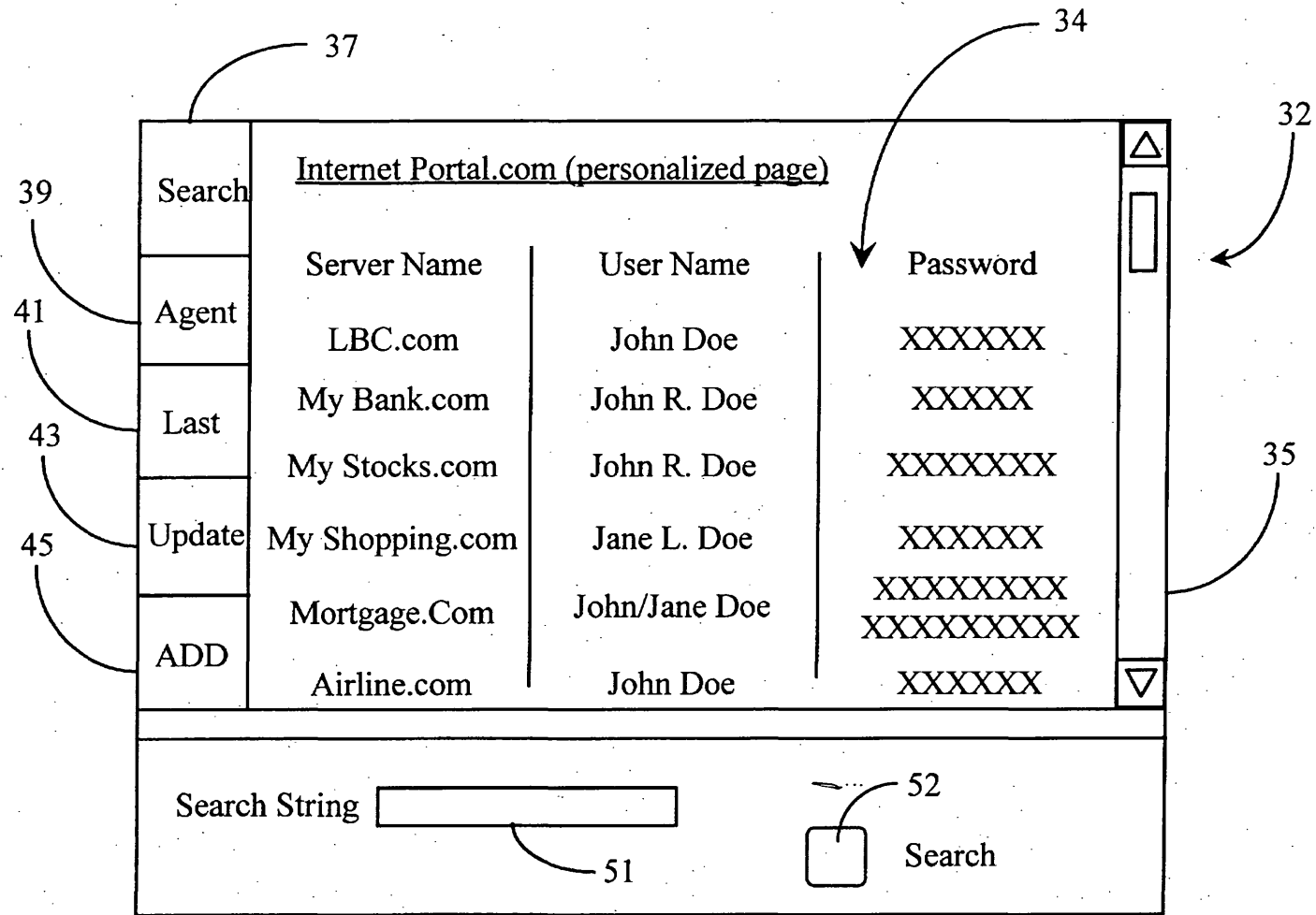


Fig. 2

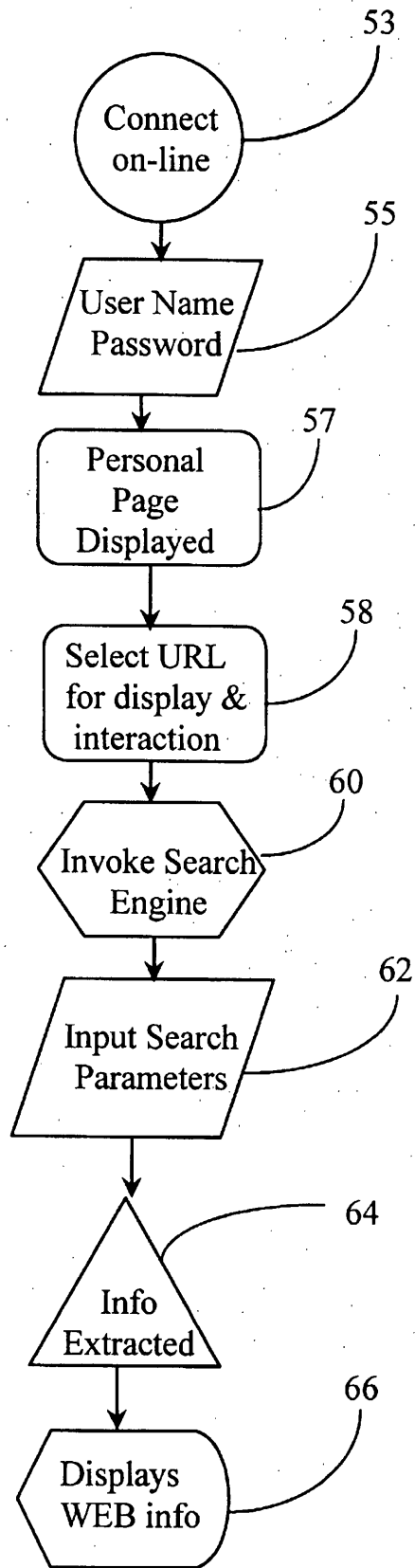


Fig. 3

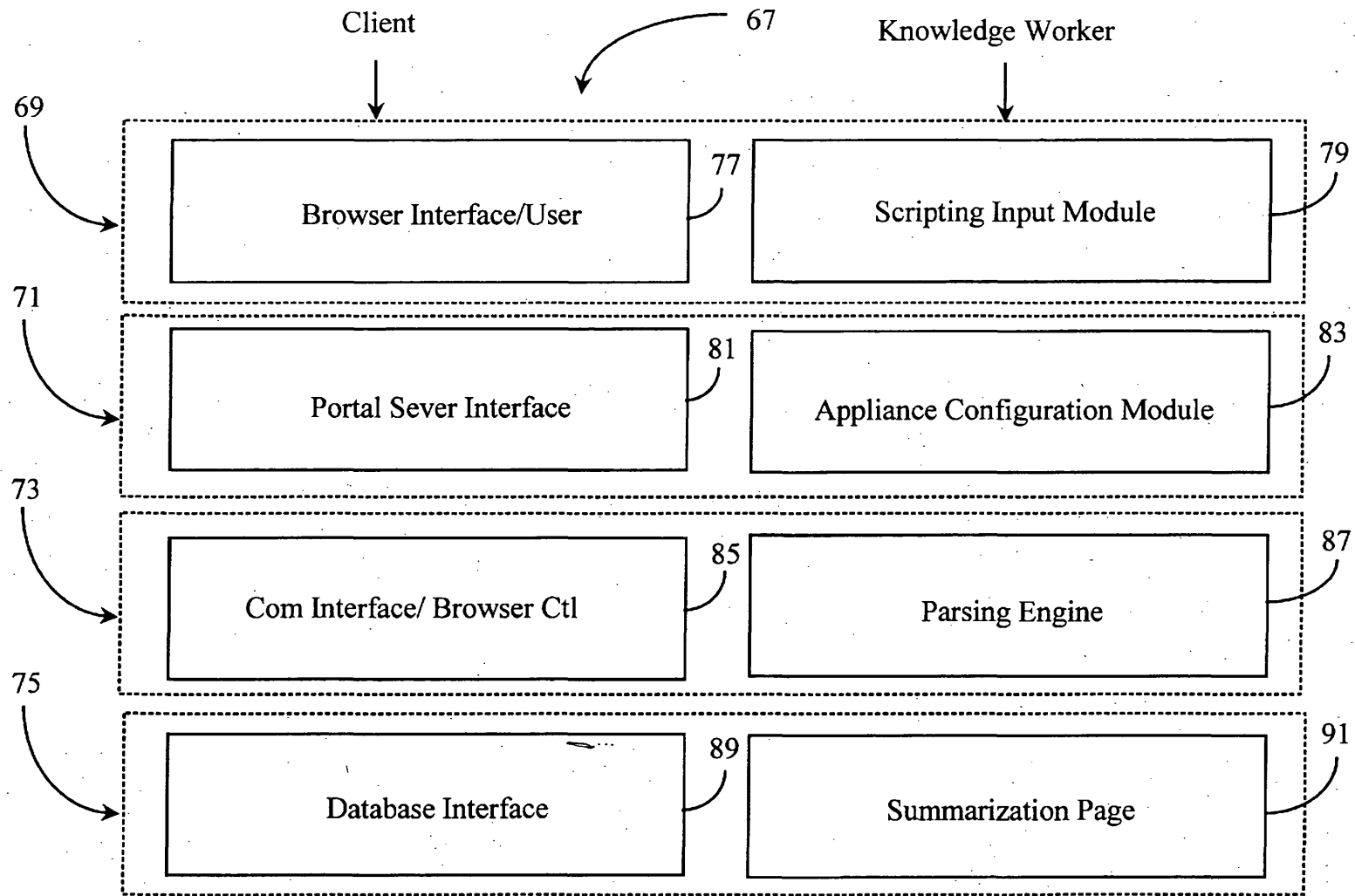


Fig. 4



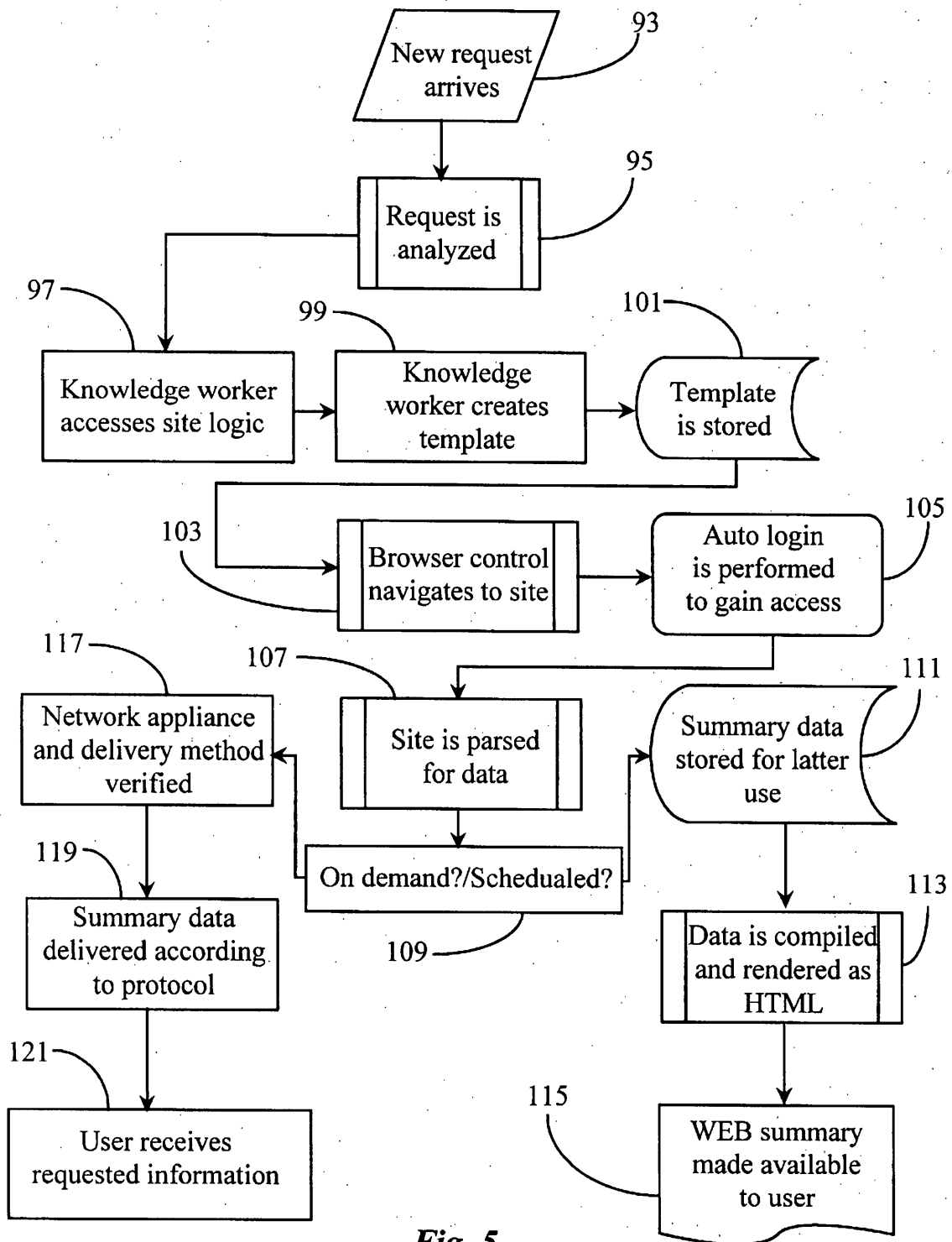


Fig. 5

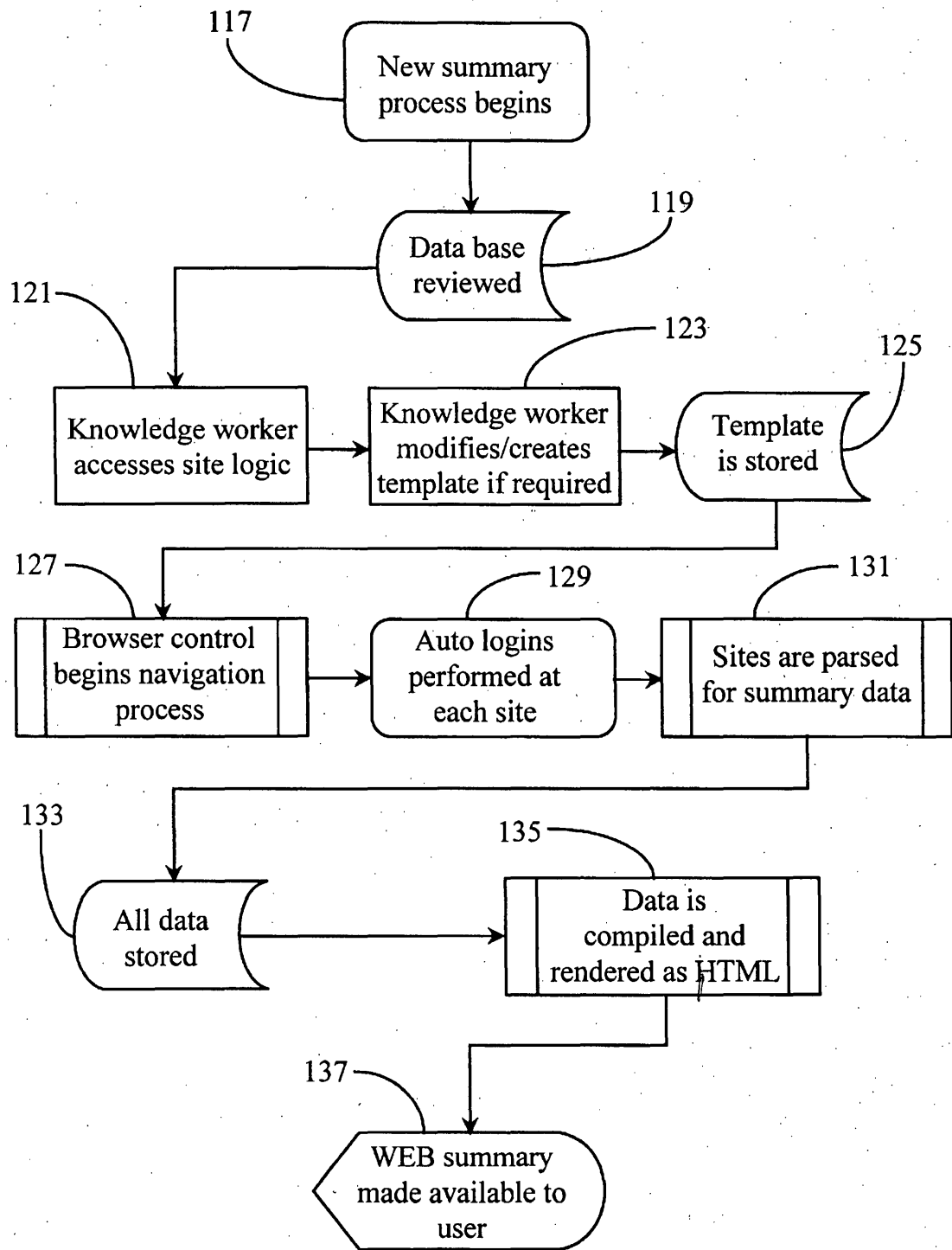


Fig. 6

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## SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION

### CROSS-REFERENCE TO RELATED DOCUMENTS

The present invention is a continuation in part (CIP) to patent application Ser. No. 09/208,740 entitled "Method and Apparatus for Providing and Maintaining a User-Interactive Portal System Accessible via Internet or other Switched-Packet-Network" filed on Dec. 8, 1998, pending, disclosure of which is incorporated herein in its entirety herein by reference.

### FIELD OF THE INVENTION

The present invention is in the field of Internet navigation including various communication means and connection technologies and pertains more particularly to methods and apparatus, including software, for gathering summary information from users or enterprise-selected WEB sites and presenting the information as HTML to the user using either a push or pull technology.

### BACKGROUND OF THE INVENTION

The information network known as the World Wide Web (WWW), which is a subset of the well-known Internet, is arguably the most complete source of publicly accessible information available. Anyone with a suitable Internet appliance such as a personal computer with a standard Internet connection may access (go on-line) and navigate to information pages (termed web pages) stored on Internet-connected servers for the purpose of garnering information and initiating transactions with hosts of such servers and pages.

Many companies offer various subscription services accessible via the Internet. For example, many people now do their banking, stock trading, shopping, and so forth from the comfort of their own homes via Internet access. Typically, a user, through subscription, has access to personalized and secure WEB pages for such functions. By typing in a user name and a password or other personal identification code, a user may obtain information, initiate transactions, buy stock, and accomplish a myriad of other tasks.

One problem that is encountered by an individual who has several or many such subscriptions to Internet-brokered services is that there are invariably many passwords and/or log-in codes to be used. Often a same password or code cannot be used for every service, as the password or code may already be taken by another user. A user may not wish to supply a code unique to the user such as perhaps a social security number because of security issues, including quality of security, that may vary from service to service. Additionally, many users at their own volition may choose different passwords for different sites so as to have increased security, which in fact also increases the number of passwords a user may have.

Another issue that can plague a user who has many passworded subscriptions is the fact that they must bookmark many WEB pages in a computer cache so that they may quickly find and access the various services. For example, in order to reserve and pay for airline travel, a user must connect to the Internet, go to his/her book-marks file and select an airline page. The user then has to enter a user name and password, and follow on-screen instructions once the page is delivered. If the user wishes to purchase tickets

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from the WEB site, and wishes to transfer funds from an on-line banking service, the user must also look for and select the personal bank or account page to initiate a funds transfer for the tickets. Different user names and passwords may be required to access these other pages, and things get quite complicated.

Although this preceding example is merely exemplary, it is generally known that much work related to finding WEB pages, logging in with passwords, and the like is required to successfully do business on the WEB.

A service known to the inventor and described in the related case listed under the cross-reference to related documents section provides a WEB service that allows a user to store all of his password protected pages in one location such that browsing and garnering information from them is much simplified. A feature of the above service allows a user to program certain tasks into the system such that requested tasks are executed by an agent (software) based on user instruction. The service stores user password and log-in information and uses the information to log-in to the user's sites, thus enabling the user to navigate without having to manually input log-in or password codes to gain access to the links.

The above-described service uses a server to present a user-personalized application that may be displayed as an interactive home page that contains all of his listed sites (hyperlinks) for easy navigation. The application lists the user's URL's in the form of hyperlinks such that a user may click on a hyperlink and navigate to the page wherein login, if required, is automatic, and transparent to the user.

The application described above also includes a software agent that may be programmed to perform scheduled tasks for the user including returning specific summaries and updates about user-account pages. A search function is provided and adapted to cooperate with the software agent to search user-entered URL's for specific content if such pages are cached somewhere in their presentable form such as at the portal server, or on the client's machine.

In addition to the features described above, it is desirable that the software agent in conjunction with the search function be enabled to navigate to any URL or group of URL's, provided as input by a user or otherwise deemed appropriate by the service provider, for the purpose of providing summary information regarding updated content for each URL, which may be presented as an HTML information-page to the user.

What is clearly needed is a method and apparatus that can independently navigate to user-supplied or known URL's, login with the appropriate password information at each URL (if required), and return requested summary information to a user in the form of a human and machine-readable HTML document. Such a system would provide an effective summarization service wherein important information may be presented to a user without requiring that the user invoke hyperlinks at his personal portal home page.

### SUMMARY OF THE INVENTION

In a preferred embodiment of the present invention an Internet Portal is provided, comprising an Internet-connected server; and a portal software executing on the server, including a summary software agent. The Portal maintains a list of Internet destinations specific for a subscriber, and the summary software agent accesses the Internet destinations, retrieves information according to pre-programmed criteria, and summarizes the retrieved information for delivery to the subscriber.

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In one embodiment the Portal further comprises a configuration and initiation interface for a subscriber to set up and start a summary search, and summary searches may be configured for individual clients as templates stored and retrieved at the Internet-connected server. In some cases summary information is stored to be later downloaded at request of the subscriber, and in others the information is immediately pushed to the client. Also in some embodiments autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal.

Methods for practicing the invention in several embodiments are provided as well in the descriptions that follow, and for the first time a system is enabled allowing subscribers to quickly access multiple WEB sites without lengthy log-in procedures, and to also summarize and download the data resulting from a summary search.

#### BRIEF DESCRIPTION OF THE DRAWINGS FIGURES

FIG. 1 is an overview of an Internet portal system and network according to an embodiment of the present invention.

FIG. 2 is an exemplary plan view of a personalized Portal home page application as it may be seen on a display monitor according to an embodiment of the present invention.

FIG. 3 is a flow diagram illustrating user interaction with the Internet portal of FIG. 1.

FIG. 4 is a block diagram illustrating a summarization software agent and capabilities thereof according to an embodiment of the present invention.

FIG. 5 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of FIG. 4 operating in a user-defined mode.

FIG. 6 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of FIG. 4 in a User-independent smart mode with minimum user input.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

According to a preferred embodiment of the present invention, a unique Internet portal is provided and adapted to provide unique services to users who have obtained access via an Internet or other network connection from an Internet-capable appliance. Such an interface provides users with a method for storing many personal WEB pages and further provides search function and certain task-performing functions. The methods and apparatus of the present invention are taught in enabling detail below.

FIG. 1 is an overview of an Internet portal system 11 and Internet network 13 according to an embodiment of the present invention. Portal system 11, in this embodiment, operates as an ISP in addition to a unique network portal, but may, in other embodiments be implemented as a stand-alone Internet server. In yet other embodiments the service and apparatus described herein may also be provided by such as a search and listing service (AltaVista™, Yahoo™) or by any other enterprise hosting a WEB-connected server.

Internet 13 is representative of a preferred use of the present invention, but should not be considered limiting, as the invention could apply in other networks and combinations of networks.

ISP 15 in this embodiment comprises a server 31, a modem bank 33, represented here by a single modem, and

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a mass storage repository 29 for storing digital data. The modem bank is a convenience, as connection to the server could be by another type of network link. ISP 15, as is typical in the art, provides Internet access services for individual subscribers. In addition to well-known Internet access services, ISP 15 also provides a unique subscription service as an Internet portal for the purpose of storing many WEB pages or destinations along with any passwords and or personal codes associated with those pages, in a manner described in more detail below. This unique portal service is provided by execution of Portal Software 35, which is termed by the inventors the Password-All suite. The software of the invention is referred to herein both as the Portal Software, and as the Password-all software suite. Also, in much of the description below, the apparatus of the invention is referred to by the Password-All terminology, such as the *Password-All Server or Password-All Portal*.

ISP 15 is connected to Internet 13 as shown. Other equipment known in the art to be present and connected to a network such as Internet 13, for example, IP data routers, data switches, gateway routers, and the like, are not illustrated here but may be assumed to be present. Access to ISP 15 is through a connection-oriented telephone system as is known in the art, or through any other Internet/WEB access connection, such as through a cable modem, special network connection (e.g. T1), ISDN, and so forth. Such connection is illustrated via access line 19 from Internet appliance 17 through modem bank 33.

In a preferred embodiment a user has access to Internet Password-All Portal services by a user name and password as is well known in the art, which provides an individualized WEB page to the subscriber. In another embodiment wherein a user has other individuals that use his or her Internet account, then an additional password or code unique to the user may be required before access to portal 31 is granted. Such personalized Portal WEB pages may be stored in repository 29, which may be any convenient form of mass storage.

Three Internet servers 23, 25, and 27, are shown in Internet 13, and represent Internet servers hosted by various enterprises and subscribed to by a user operating appliance 17. For example, server 23 may be a bank server wherein interactive on-line banking and account managing may be performed. Server 25 may be an investment server wherein investment accounts may be created and managed. Server 27 may be an airline or travel server wherein flights may be booked, tickets may be purchased, and so on. In this example, all three servers are secure servers requiring user ID and password for access, but the invention is not necessarily limited to just secure services.

In a preferred embodiment of the present invention, a subscribing user operating an Internet-capable appliance, such as appliance 17, connects to Password-All Portal system 11 hosted by ISP 15, and thereby gains access to a personalized, interactive WEB page, which in turn provides access to any one of a number of servers on Internet 13 such as servers 23, 25, and 27, without being required to enter additional passwords or codes. In a preferred embodiment the software that enables this service is termed Password-All by the inventors. Password-All may be considered to be a software suite executing on the unique server, and in some instances also on the user's station (client). Additional interactivity provided by portal software 35 allows a connected user to search his listed pages for information associated with keywords, text strings, or the like, and allows a user to program user-defined tasks involving access and interaction with one or more Internet-connected servers such

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as servers 23, 25, and 27 according to a pre-defined time schedule. These functions are taught in enabling detail below.

FIG. 2 is an illustration of a personalized portal page as may be seen on a display monitor according to an embodiment of the present invention, provided by Password-All Portal software 35 executing on server 31, in response to secure access by a subscriber. Page 32 presents an interactive listing 34 of user-subscribed or member WEB pages, identified in this example by URL, but which may also be identified by any convenient pseudonym, preferably descriptive, along with user name and typically encrypted password information for each page. Listed in a first column under destination, are exemplary destinations LBC.com, My Bank.com, My Stocks.com, My shopping.com, Mortgage.com, and Airline.com. These are but a few of many exemplary destinations that may be present and listed as such on page 33. In order to view additional listings listed but not immediately viewable from within application 33, a scroll bar 35 is provided and adapted to allow a user to scroll up or down the list to enable viewing as is known in the art.

Items listed in list 34 in this example may be considered destinations on such as servers 23, 25, and 27 of FIG. 1. Typically the URL associated with an item on this list will not take a user to a server, per se, but to a page stored on a server. User names and password data associated with each item in list 34 are illustrated in respective columns labeled user name, and password, to the right of the column labeled destination. Each listing, or at least a portion of each listing, is a hyperlink invoking, when selected, the URL to that destination. In some instances a particular service may have more than one associated URL. For example, My Bank.com may have more than one URL associated for such as different accounts or businesses associated also with a single subscriber. In this case there may be a sub-listing for different destinations associated with a single higher-level listing. This expedient is not shown, but given this teaching the mechanism will be apparent to those with skill in the art.

In some embodiments one page 33 may be shared by more than one user, such as a husband and wife sharing a common account and subscription. An instance of this is illustrated herein with respect to the server labeled Mortgage.com wherein both a John and a Jane Doe are listed together under the column labeled user name. In another embodiment, a network of individuals, perhaps business owners, authorized co-workers, investment parties, or the like may share one application. In this way, system 11 may be adapted for private individuals as well as business uses.

After gaining access to application 33 which is served via Internet portal server 31 of FIG. 1, a user may scroll, highlight, and select any URL in his or her list 34 for the purpose of navigation to that particular destination for further interaction. Application 33 already has each password and user name listed for each URL. It is not necessary, however, that the password and user name be displayed for a user or users. These may well be stored transparently in a user's profile, and invoked as needed as a user makes selections. Therefore, a user is spared the need of entering passwords and user names for any destinations enabled by list 34. Of course, each list 34 is built, configured and maintained by a subscribing user or users, and an editing facility is also provided wherein a user may edit and update listings, including changing URL's adding and deleting listings, and the like.

In another aspect of the invention new listings for a user's profile, such as a new passthrough to a bank or other

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enterprise page, may be added semi-automatically as follows: Typically, when a user opens a new account with an enterprise through interaction with a WEB page hosted by the enterprise, the user is required to provide certain information, which will typically include such as the user's ID, address, e-mail account, and so forth, and typically a new user name and password to access the account. In this process the user will be interacting with the enterprise's page from his/her browser. A Password-All plug-in is provided wherein, after entering the required information for the new enterprise, the user may activate a pre-determined signal (right click, key stroke, etc.), and the Password-All suite will then enter a new passthrough in the user's Password. All profile at the Password-All Portal server.

In a related method for new entries, the enterprise hosting the Password-All Portal may, by agreement with other enterprises, provide log-in and sign-up services at the Password-All Portal, with most action transparent to the user. For example, there may be, at the Password-All Portal, a selectable browser list of cooperating enterprises, such as banks, security services, and the like, and a user having a Password-All Portal subscription and profile may select among such cooperating enterprises and open new accounts, which will simultaneously and automatically be added to the Password-All Portal page for the user and to the server hosted by the cooperating enterprise. There may be some interactivity required for different accounts, but in the main, much information from the user's profile may be used directly without being re-entered.

The inventors have anticipated that many potential users may well be suspicious of providing passwords and user names to an enterprise hosting a Password-All Portal Server executing a service like Password-All according to embodiments of the present invention. To accommodate this problem, in preferred embodiments, it is not necessary that the user provide the cleartext password to Password. All. Instead, an encrypted version of each password is provided. When a user links to his passthrough page in Password-All at the Password-All Portal server, when he/she invokes a hyperlink, the encrypted password is returned to the user's system, which then, by virtue of the kept encryption key or master password, invokes the true and necessary password for connection to the selected destination. It is thus not necessary that cleartext passwords be stored at the Password-All Portal server, where they may be vulnerable to attack from outside sources, or to perceived misuse in other ways as well.

In a related safety measure, in a preferred embodiment of the invention, a user's complete profile is never stored on a single server, but is distributed over two or more, preferably more, servers, so any problem with any one server will minimize the overall effect for any particular user.

Password-All, as described above, allows a user to access a complete list of the user's usual cyberspace destinations, complete with necessary log-on data, stored in an encrypted fashion, so a user may simply select a destination (a hyperlink) in the Password-All list, and the user's browser then invokes the URL for the selected destination. In an added feature, Password-All may display banner ads and other types of advertisement during the navigation time between a hyperlink being invoked and the time the destination WEB page is displayed.

In yet another embodiment of the invention, a user/subscriber need not access the Password-All page to enjoy the advantages of the unique features provided. In this variation, a Plug-In is provided for the subscriber's WEB

browser. If the subscriber navigates by use of the local browser to a WEB page requiring a secure log-in, such as his/her on-line banking destination, when the subscriber is presented with an input window for ID and Password, the plug in may be activated by a predetermined user input, such as a hot key or right click of the mouse device. The plug-in then accesses, transparently, the Password-All page (which may be cached at the client), and automatically accesses and provides the needed data for log-on.

In yet another aspect of the invention a search option 37 allows a user to search list 34 for specific URL's based on typed input such as keywords or the like. In some cases, the number of URL's stored in list 34 can be extensive making a search function such as function 37 an attractive option. A criteria dialog box 51 illustrated as logically separated from and below list 34 is provided and adapted to accept input for search option 37 as is known in the art. In one embodiment, search option 37 may bring up a second window wherein a dialog box such as box 51 could be located.

In another aspect of the invention the search function may also be configured in a window invoked from window 33, and caused to search all or selected ones of listed destinations, and to return results in a manner that may be, at least to some extent, configured by a user. For example, a dialog box may be presented wherein a user may enter a search criteria, and select among all of the listed destinations. The search will then be access each of the selected destinations in turn, and the result may be presented to the user as each instance of the criteria is found, or results may be listed in a manner to be accessed after the search.

Preferably the search function is a part of the Password-All Portal software, available for all users, and may be accessed by hyperlinks in user's personal pages. In some embodiments users may create highly individualized search functions that may be stored in a manner to be usable only by the user who creates such a function.

In many aspects of the present invention, knowledge of specific WEB pages, and certain types of WEB pages, is highly desirable. In many embodiments characteristics of destination WEB pages are researched by persons (facilitators) maintaining and enhancing Password-All Portal software 35, and many characteristics may be provided in configuration modules for users to accomplish specific tasks. In most cases these characteristics are invoked and incorporated transparent to the user.

In yet another aspect of the present invention, the Password-All suite is structured to provide periodic reports to a user, in a manner to be structured and timed by the user, through the user's profile. For example, reports of changes in account balances in bank accounts, stock purchases, stock values, total airline travel purchases, frequent-flier miles, and the like may be summarized and provided to the users in many different ways. Because the Password-All Portal server with the Password-All software site handles a broad variety of transactional traffic for a user, there is an opportunity to summarize and collect and process statistics in many useful ways. In preferred embodiments of the invention such reports may be furnished and implemented in a number of different ways, including being displayed on the user's secure personal WEB page on the Password-All Portal.

In addition to the ability of performing tasks as described above, task results including reports, and hard documents such as airline tickets may be sent over the Internet or other data packet-networks to user-defined destinations such as fax machines, connected computer nodes, e-mail servers,

and other Internet-connected appliances. All tasks may be set-up and caused to run according to user-defined schedules while the user is doing something else or is otherwise not engaged with the scheduled task.

In another embodiment of the present invention, recognizing the increasing use of the Internet for fiscal transactions, such as purchasing goods and services, a facility is provided in a user's profile to automatically track transactions made at various destinations, and to authorize payment either on a transaction-by-transaction basis, or after a session, using access to the user's bank accounts, all of which may be pre-programmed and authorized by the user.

Other functions or options illustrated as part of application 35 include a last URL option 41, an update function 43, and an add function 45. Function 41 allows a user to immediately navigate to a last visited URL. Update function 43 provides a means of updating URL's for content and new address. An add function enables a user to add additional URL's to list 34. Similarly, function 45 may also provide a means to delete entries. Other ways to add accounts are described above. It should be noted that the services provided by the unique Password-All Portal in embodiments of the present invention, and by the Password-All software suite are not limited to destinations requiring passwords and user names. The Password-All Portal and software in many embodiments may also be used to manage all of a user's bookmarks, including editing of bookmarks and the like. In this aspect, bookmarks will typically be presented in indexed, grouped, and hierarchical ways.

There are editing features provided with Password-All for adding, acquiring, deleting, and otherwise managing bookmarks. As a convenience, in many embodiments of the invention, bookmarks may be downloaded from a user's Password-All site, and loaded onto the same user's local browser. In this manner, additions and improvements in the bookmark set for a user may be used without the necessity of going to Password-All. Further, bookmarks may be uploaded from a user's local PC to his/her home page on the Password-All site by use of one or more Password-All plug-ins.

It will be apparent to the skilled artisan, given the teaching herein, that the functionality provided in various embodiments of the invention is especially applicable to Internet-capable appliances that may be limited in input capability. For example, a set-top box in a WEB TV application may well be without a keyboard for entering IDs and Passwords and the like. In practice of the present invention keyboard entry is minimized or eliminated. The same comments apply to many other sorts of Internet appliances.

In preferred embodiments of the invention, once a subscriber-user is in Password-All, only an ability to point-and-click is needed for all navigation. To get into the Password-All site, using a limited apparatus, such as an appliance without a keyboard or keypad, a Smartcard or embedded password may be used, or some other type of authentication.

It will be apparent to one with skill in the art that an interactive application such as application 33 may be provided in a form other than a WEB page without departing from the spirit and scope of the present invention. For example, an application such as application 33 may be provided as a downloadable module or program that may be set-up and configured off-line and made operational when on-line.

FIG. 3 is a flow diagram illustrating user interaction with the Internet Password-All Portal of FIG. 1. The following

process steps illustrated, according to an embodiment of the present invention, are intended to illustrate exemplary user-steps and automated software processes that may be initiated and invoked during interaction with an Internet portal of the present invention such as portal 31 of FIG. 1. In step 53 a user connects to the Internet or another previously described switched-packet network via a compatible appliance such as Internet appliance 17 of FIG. 1.

At step 55, a user enters a user-name and password, which, in one embodiment, may simply be his ISP user name and password. In another embodiment, a second password or code would be required to access an Internet portal such as portal server 31 of FIG. 1 after logging onto the Internet through the ISP. In some cases, having a special arrangement with the ISP, there may be one password for both Internet access through the ISP and for Password-All. At step 57 a personal WEB page such as page 32 of FIG. 2 is displayed via Internet portal server 31. At minimum, the personalized WEB page will contain all user configured URL's, and may also be enhanced by a search function, among other possibilities.

In step 58 a user will, minimally, select a URL from his or her bookmarked destinations, and as is known by hyperlink technology, the transparent URL will be invoked, and the user will navigate to that destination for the purpose of normal user interaction. In this action, the Password-All Portal software transparently logs the user on to the destination page, if such log-on is needed.

At step 60 the user invokes a search engine by clicking on an option such as described option 37 of FIG. 2. At step 62, the user inputs search parameters into a provided text field such as text field 51 of FIG. 2. After inputting such parameters, the user starts the search by a button such as button 52. The search engine extracts information in step 64. Such information may be, in one option, of the form of URL's fitting the description provided by search parameters. A searched list of URL's may be presented in a separate generated page in step 66 after which a user may select which URL to navigate to. In an optional search function, the user may provide search criteria, and search any or all of the possible destinations for the criteria.

In another embodiment wherein WEB pages are cached in their presentable form, information extracted in step 64 may include any information contained in any of the stored pages such as text, pictures, interactive content, or the like. In this case, one displayed result page may provide generated links to search results that include the URL associated with the results. Perhaps by clicking on a text or graphic result, the associated WEB page will be displayed for the user with the result highlighted and in view with regards to the display window.

#### Enhanced Agent for WEB Summaries

In another aspect of the present invention, a software agent, termed a gatherer by the inventors, is adapted to gather and return summary information about URL's according to user request or enterprise discretion. This is accomplished in embodiments of the present invention by a unique scripting and language parsing method provided by the inventor wherein human knowledge workers associated with the service provide written scripts to such a gatherer according to subscriber or enterprise directives. Such a software gatherer, and capabilities thereof, is described in enabling detail below.

Referring now to FIG. 1, there is illustrated an exemplary architecture representing a portal service-network which, in this case is hosted by ISP 15. Portal software 35 in this

embodiment executes on portal server 31 set-up at the ISP location. Mass repository 29 is used for storing subscriber information such as passwords, login names, and the like. Internet servers 23, 25, and 27 represent servers that are adapted to serve WEB pages of enterprises patronized by a subscriber to the portal service such as one operating Internet appliance 17.

The main purpose of portal software 35 as described above with reference to FIG. 2, is to provide an interactive application that lists all of the subscriber's WEB sites in the form of hyperlinks. When a user invokes a hyperlink from his personal list, software 35 uses the subscriber's personal information to provide an automatic and transparent login function for the subscriber while jumping the subscriber to the subject destination.

Referring again to FIG. 2, an interactive list 34 containing user-entered hyperlinks and a set of interactive tools is displayed to a subscriber by portal software 35 of FIG. 1. One of the tools available to a subscriber interacting with list 34 is agent (software) 39. Agent 39 may be programmed to perform certain tasks such as obtaining account information, executing simple transactions, returning user-requested notification information about upcoming events, and so on. Search function 37 and update function 43 may be integrated with agent 39 as required to aid in functionality.

It is described in the above disclosure that agent 39 may, in some embodiments, search for and return certain summary information contained on user-subscribed WEB pages, such as account summaries, order tracking information and certain other information according to user-defined parameters. This feature may be programmed by a user to work on a periodic time schedule, or on demand.

In the following disclosure, enhancements are provided to agent 39. Such enhancements, described in detail below, may be integrated into agent 39 of portal software 35 (FIGS. 1 and 2); and may be provided as a separate agent or gatherer to run with portal software 35; or may, in some embodiments, be provided as a standalone service that is separate from portal software 35.

FIG. 4 is a block diagram illustrating a summarization software agent 67 and various capabilities and layers thereof according to an embodiment of the present invention. Summarization agent 67, hereinafter termed gatherer 67, is a programmable and interactive software application adapted to run on a network server. Gatherer 67 may, in one embodiment, be integrated with portal software 35 of FIG. 1 and be provided in the form of a software module separate from agent 39 (FIG. 2). In another embodiment, gatherer 67 may be a part of agent 39 as an enhancement to the function of that agent as previously described. In still another embodiment, gatherer 67 may be provided as a parent or client-side application controlled by a separate service from the portal service described above.

In this exemplary embodiment gatherer 67 is a multi-featured software application having a variety of sub-modules and interface modules incorporated therein to provide enhanced function. Gatherer 67 has a client/service interface layer 69 adapted to enable directive input from both a client (user) and a knowledge worker or workers associated with the service. A browser interface 77 is provided in layer 69, and adapted to provide access to application 67 from a browser running on a client's PC or other Internet or network appliance. Interface 77 facilitates bi-directional communication with a user's browser application (not shown) for the purpose of allowing the user to input summary requests into gatherer 67 and receive sum-

mary results. Interface 77 supports all existing network communication protocols such as may be known in the art, and may be adapted to support future protocols.

Layer 69 also comprises a unique input scripting module 79 that is adapted to allow a human knowledge worker to create and supply directive scripts containing the site logic needed by gatherer 67 to find and retrieve data from a WEB site. In this case, gatherer 67 executes and runs on a network server such as server 31 of FIG. 1. However, this is not required in order to practice the present invention.

It is assumed in this example that gatherer 67 is part of the portal software suite 35 running on server 31 of FIG. 1. Gatherer 67 may be provided as several dedicated agents, or as one multi-functional agent without departing from the spirit and scope of the present invention. For example, one gatherer 67 may be scripted and programmed to execute a single user request with additional gatherers 67 called upon to perform additional user-requests. Alternatively, one gatherer 67 may be dedicated and assigned to each individual user and adapted to handle all requests from that user.

Interface layer 69 facilitates exchange of information from both a client and a knowledge worker. A client operating a WEB browser with an appropriate plug-in is enabled to communicate and interact with gatherer 67. For example, a user may enter a request to return a summary of pricing for all apartments renting for under \$1000.00 per month located in a given area (defined by the user) from apartments.com (one of user's registered WEB sites). The just mentioned request would be categorized as either a periodic request, or a one time (on demand) request. The communicated request initiates a service action wherein a knowledge worker associated with the service uses module 79 to set-up gatherer 67 to perform its function. Module 79 is typically executed from a network-connected PC operated by the knowledge worker.

According to an embodiment of the present invention, a unique scripting method facilitated by module 79 is provided to enable gatherer 67 to obtain the goal information requested by a user. For example, the above mentioned example of WEB-site apartments.com has a specific HTML (hyper-text-markup-language) logic that it uses to create its site and post its information. Such site logic is relatively standard fare for a majority of different sites hosted by different entities. Using this knowledge, a knowledge worker creates a site-specific script or template for gatherer 67 to follow. Such a template contains descriptions and locations of the appropriate fields used, for example, at apartments.com. Apartment description, location, deposit information, rental information, agent contact information, and other related fields are matched in terms of location and label description on the template created with module 79. Completed templates are stored in a database contained in a storage facility such as, perhaps, repository 29 of FIG. 1. Such templates may be reused and may be updated (edited) with new data.

In one embodiment, one script may contain site logics for a plurality of WEB pages, and instructions for specific navigational instruction and password or login information may be contained therein and executed serially, such as one site at a time. It is important to note that the knowledge worker or workers may perform much of their scripting via automatic controls such as by object linking and embedding (OLE) and a minor portion of scripting may be performed manually in an appropriate computer language, many of which are known in the art.

Gatherer 67 also has a process layer 71 adapted for internal information gathering and parameter configuration.

An optional portal server interface 81 is provided and adapted to allow gatherer 67 to provide updated information to a user's list of hyperlinks and also to obtain data from portal server 31 if required. For example, required hyperlinks may be mirrored from a user's home page to a scripting template for navigational purposes. In an embodiment wherein gatherer 67 is part of a standalone service, a convention for providing user login information may be supplied at the client's end when a request is made. For example, an encrypted password may be supplied by a client plug-in and gatherer 67 may temporarily borrow the user's encryption key when auto login is performed.

An appliance configuration module 83 is provided and adapted to allow a user to define and configure an Internet appliance to communicate with the service and receive summary information. Such appliances may include but are not limited to palm top PC's, lap top PC's, cellular telephones, WEB TV's, and so on. Typically, a user will be presented a configuration WEB page from a network server that displays in his browser window on his desktop PC. The page contains an interface for communicating device parameters and communication protocol types to module 83. In this way, a user may configure a preferred device for receipt of summary information. Device parameters and communication protocols inherent to such a device are incorporated into the scripting of the site template and are used as instructions for WEB summary delivery.

A navigation layer 73 is provided and adapted to perform the function of external site navigation and data gathering for gatherer 67. To this end, a communication interface/browser control module 85 is provided and adapted to function as a WEB browser to access WEB sites containing WEB data. Control 85 receives its instruction from the scripted template created by the knowledge worker.

A parsing engine 87 is provided and adapted to parse individual WEB sites according to a template created via scripting module 79. Parsing engine 87 may be a PERL engine, an IE HTML engine, or any other or combination of known parsing engines. The template (not shown) tells control 85 and parsing engine 87 where to go and what fields at the destination site to look for to access desired data. Once the data fields are located, parsing engine 87 gathers current data in the appropriate field, and returns that data to the service for further processing such as data conversion, compression and storage, and the like.

Because WEB sites use tools that use consistent logic in setting up their sites, this logic may be used by the summarization service to instruct control 83 and parsing engine 87. The inventor provides herein an exemplary script logic for navigating to and garnishing data from Amazon™.com. The hyperlinks and/or actual URLs required for navigation are not shown, but may be assumed to be included in the template script. In this example, a company name Yodlee (known to the inventors) is used in the script for naming object holders and object containers, which are in this case Active X™ conventions. In another embodiment, Java™ script or another object linking control may be used. The scripted template logic example is as follows:

```
# Site amazon.orders.x - shows status of orders from Amazon
login( 7 );
get( "/exec/obidos/order-list/" );
65 my @tables = get_tables_containing_text( "Orders:" );
my $order_list = new Yodlee::ObjectHolder( 'orders' );
```



-continued

```

$order_list->source( 'amazon' );
$order_list->link_info( get_link_info() );
my @href_list;
my @container_list;
foreach my $table ( @tables ) {
    my @rows = get_table_rows();
    foreach my $i ( 0 .. $#rows ) {
        select_row( $i );
        my $text = get_text( $rows[ $i ] );
        next if $text =~ /Orders:;Status/;
        my @items = get_row_items();
        next unless @items >= 4;
        my( $order_num, $date, $status );
        select_cell( 1 );
        $order_num = get_cell_text();
        my $href = get_url_of_first_href( get_cell() );
        select_cell( 2 );
        $date = get_cell_text();
        select_cell( 3 );
        $status = get_cell_text();
        next unless defined $order_num and defined $date and defined
    }
}
$result( $order_list );

```

The above example is a script that instructs control **85** and parser **87** to navigate to and obtain data from Amazon™.com, specifically that data that reflects the user's current order status. Scripts may also be written to obtain virtually any type of text information available from any site. For example, a user may wish to obtain the New York Times headlines, the top ten performing stocks, a comparative list of flights from San Francisco to New York, etc. In one embodiment, metadata may be associated with and used in-place of the actual scripted language for the purpose of reducing complication in the case of many scripts on one template.

A data processing layer **75** is provided and adapted to store, process, and present returned data to users according to enterprise rules and client direction. A database interface module **89** is provided and adapted to provide access for gatherer **67** to a mass repository such as repository **29** of FIG. 1, for the purpose of storing and retrieving summary data, templates, presentation directives, and so on. Gatherer agent **67** may also access data through interface **89** such as profile information, user account and URL information, stored site logics and so on. Data scanned from the WEB is stored in a canonical format in a database such as repository **29**, or in another connected storage facility. All stored data is, of course, associated with an individual who requested it,

or for whom the data is made available according to enterprise discretion.

A summarization page module **91** is provided and adapted to organize and serve a WEB summary page to a user. Module **91**, in some embodiments, may immediately push a WEB summary to a user, or module **91** may store such summarized pages for a user to access via a pull method, in which case a notification may be sent to the user alerting him of the summary page availability. Summarization module **91** includes an HTML renderer that is able to format data into HTML format for WEB page display. In this way, e-mail messages and the like may be presented as HTML text on a user's summarization page. Moreover, any summary data from any site may include an embedded hyperlink to that site. In this way, a user looking at an e-mail text in HTML may click on it and launch the appropriate e-mail program. Other sites will, by default, be linked through the summary page.

Many users will access their summary data through a WEB page as described above, however, this is not required in order to practice the present invention. In some embodiments, users will want their summary information formatted and delivered to one of a variety of Internet-capable appliances such as a palm top or, perhaps a cell phone. To this end, the renderer is capable of formatting and presenting the summary data into a number of formats specific to alternative devices. Examples of different known formats include, but are not limited to XML, plain text, VoXML, HDML, audio, video, and so on.

In a preferred embodiment of the present invention, gatherer **67** is flexible in such a way as it may act according to enterprise rules, client directives, or a combination of the two. For example, if a user makes a request for summary data about a user/subscribed WEB page to be periodically executed and presented in the form of a HTML document, then gatherer **67** would automatically access and analyze the required internal information and user provided information to formulate a directive. Using scripting module **79**, a knowledge worker provides a template (if one is not already created for that site) that contains the "where to go" and "what to get" information according to site logic, user input, and known information.

Alternatively, if a user requests a summary about data on one of his sites such as, perhaps, current interest rates and re-finance costs at his mortgage site, the service may at its own discretion provide an additional unsolicited summary from an alternate mortgage site for comparison. This type of summarization would be designed to enhance a user's position based on his profile information. In this case, updated data about latest interest rates, stock performances, car prices, airline ticket discounts, and so on would be stored by the service for comparative purposes. If a user request for a summary can be equaled or bettered in terms of any advantage to the user, such summary data may be included.

In many cases, created templates may be re-used unless a WEB site changes its site logic parameters, in which case, the new logic must be accessed and any existing templates must be updated, or a new template may be created for the site. The templates contain site-specific script obtained from the site and stored by the knowledge workers. In one embodiment, companies hosting WEB pages automatically provide their site logics and any logic updates to the service by virtue of an agreement between the service and the WEB hosts.

In an alternative embodiment gatherer **67** may be implemented as a client application installed on a user's PC. In

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this embodiment, a user would not be required to supply log-in or password codes. Summarization scripts may be sent to the client software and templates may be automatically created with the appropriate scripts using log-in and password information encrypted and stored locally on the user's machine.

In addition to providing WEB summary information, gatherer 67 may also be used to provide such as automatic registration to new sites, and for updating old registration information to existing sites. For example, if a user wishes to subscribe, or register at a new site, only the identification of the site is required from the user as long as his pertinent information has not changed. If a new password or the like is required, gatherer 67 through control module 73 may present login or password codes from a list of alternative codes provided by a user. In another embodiment, a database (not shown) containing a wealth of password options may be accessed by gatherer 67 for the purpose of trying different passwords until one is accepted by the site. Once a password or log-in code is accepted, it may be sent to a user and stored in his password list and at the network level.

It will be apparent to one with skill in the art that a software application such as gatherer 67 may be implemented in many separate locations connected in a data network. For example, a plurality of gatherer applications may be distributed over many separate servers linked to one or more mass repositories. Client applications include but are not limited to a WEB-browser plug-in for communicating to the service. Plug-in extensions may also be afforded to proxy servers so that auto-login and data access may still be performed transparent to a user.

In another embodiment, plug-ins enabling communication with gatherer 67 may be provided and configured to run on other network devices for the purpose of enabling such a device to initiate a request and get a response without the need for a desktop computer.

In most embodiments a user operating a desktop PC will order a one time or periodic summary related to some or all of his subscribed WEB sites. A logical flow of an exemplary request/response interaction is provided below.

FIG. 5 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of FIG. 4 operating in a user-defined mode. In step 93, a user has initiated a new request for a summary (summary order). It is assumed for the purpose of discussion, that the request of step 93 involves a site wherein no template has been created. In step 95, the request is received and analyzed. A knowledge worker will likely perform this step. The new request may be posted to the user's portal home page, sent directly to gatherer 67, or even communicated through e-mail or other media to the service.

In step 97 a knowledge worker accesses particular site logic associated with the request URLs. For example, if the request involves a plurality of URLs, then all site logics for those URLs are accessed. Logic may be available in a repository such as repository 29 of FIG. 1 if they were obtained at the time of user registration to a particular URL, or sent in by WEB-site hosts shortly after registration. If it is a completely new URL, then the logic must be obtained from the site. In most cases however, the logic will be known by virtue of a plurality of users accessing common URLs. Therefore cross-linking in a database of logic/user associations may be performed to access a logic for a site that is new to one particular user, but not new to another.

In step 99, the knowledge worker creates a template by virtue of scripting module 79 (FIG. 4) containing all site

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logic, URLs, log-in and password information, and the user request information. As described previously, templates may be re-used for a same request. In most cases, scripting may be mostly automated with minimum manual input performed by the knowledge worker. In many cases, an existing template will match a new request exactly, and may be re-used. In that case steps 97, 99, and 101 would not be required.

In step 101 the template is stored and associated with the requesting user. The stored template may now be retrieved at a scheduled time for performing the summary gathering. At step 103, a browser control such as module 85 of FIG. 4 is activated to access the stored template and navigate to specified URLs for the purpose of gathering summary data. If a timing function is attributed to the template stored in step 101, then the template may self execute and call up the browser function. In another embodiment, the knowledge worker may notify the browser control to get the template for its next task. In some embodiments, a plurality of controls may be used with one template as previously described.

In step 105, automatic log-in is performed, if required, to gain access to each specified URL. In step 107, a specified WEB-page is navigated to and parsed for requested data according to the logic on the template. If there are a plurality of WEB -pages to parse, then this step is repeated for the number of pages. A variety of parsing engines may be used for this process such as an IE™ parser, or a PERL™ parser. Only the requested data is kept in step 107.

A request may be an on-demand request requiring immediate return, or a scheduled request wherein data may be posted. At step 109, such logic is confirmed. If the data is to be presented according to a periodic schedule, then summary data parsed in step 107 is stored for latter use in step 111. In step 113, the summary data is rendered as HTML if not already formatted, and displayed in the form of a summary WEB-page in step 115. The summary page may be posted for access by a user at a time convenient to the user (pull), or may be pushed as a WEB-page to the user and be made to automatically display on the user's PC. Notification of summary page availability may also be sent to a user to alert him of completion of order.

If the summary data is from a one-time on-demand request and required immediately by a user, then a network appliance and data delivery method (configured by the user) is confirmed, and the data is rendered in the appropriate format for delivery and display in step 117. In step 119, the summary data is delivered according to protocol to a user's designated appliance. In step 121 a user receives requested information in the appropriate format.

It will be apparent to one with skill in the art that there may be more or fewer logical steps as well as added sub-steps than are illustrated in this example. For example, step 105 may in other embodiments include sub-steps such as getting an encryption key from a user. In still another embodiment, part of a request may be rendered as HTML as in step 113 while certain other portions of the same request data might be rendered in another format and delivered via alternative methods. There are many possibilities.

The method and apparatus of the present invention may be used to present summaries to users without user input. Process logic such as this is detailed below.

FIG. 6 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of FIG. 4 in a User-independent smart mode with minimum or no user input. In step 117 an enterprise-initiated summary

process begins. In this case, the enterprise may be assisting a user in finding a better deal or, perhaps presenting the individual with summaries from and links to alternative pages not yet subscribed to by a user.

In step 119, a database containing user information and parameters is accessed and reviewed. Certain information specific to a user may be required to initiate an enterprise-sponsored summary report. At step 121, the knowledge worker accesses the site logic specific to the specified target site or sites for summarization. In step 123, the knowledge worker modifies an existing user template, or creates a new one if necessary. At step 125 the template is stored in a repository such as repository 29 and associated with the user.

As described in FIG. 5, the template either self-executes according to a timed function and invokes a browser control such as control 85 (FIG. 4), or is accessed by control 85 as a result of task notification. In step 127, the browser control begins navigation. Auto logins are performed, if required, in step 129 to gain access to selected sites. If the WEB pages are new to a user, and the user has no registration with the WEB site, then through agreement, or other convention, the service may be provided access to such sites. Such an agreement may be made, for example, if the host of the WEB site realizes a possibility of gaining a new customer if the customer likes the summary information presented. In many other situations, no password or login information is required to obtain general information that is not personal to a client.

In step 131, all sites are parsed for summary data and stored in canonical fashion in step 133. At step 135, the data is compiled and rendered as HTML for presentation on a summary page. In step 137, a WEB summary containing all of the data is made available to a user and the user is notified of it's existence.

Providing certain information not requested by a user may aid in enhancing a user's organization of is current business on the WEB. Moreover, unsolicited WEB summaries may provide better opportunities than the current options in the user's profile. Of course, assisting a user in this manner will require that the enterprise (service) have access to the user's profile and existing account and service information with various WEB sites on the user's list. A user may forbid use of a user's personal information, in which case, no enterprise-initiated summaries would be performed unless they are conducted strictly in an offer mode instead of a comparative mode.

The method and apparatus also may be practiced in a language and platform independent manner, and be implemented over a variety of scalable server architectures.

The method and apparatus of the present invention may be practiced via private individuals on the Internet, businesses operating on a WAN connected to the Internet, businesses operating via private WAN, and so on. There are many customizable situations.

The present invention as taught herein and above should be afforded the broadest of scope. The spirit and scope of the present invention is limited only by the claims that follow.

What is claimed is:

1. An Internet Portal, comprising:
  - an Internet-connected server;
  - a list of addresses of Internet sites associated with a specific person, which sites store information specific to the person; and
  - a software suite executing on the server, the software suite including a set of gathering spitware agents, with at least one gatherer agent dedicated to each of the Internet sites;
 wherein the Portal accomplishes a gathering cycle by accessing individual ones of the Internet sites, authenticating too each site accessed as the person, and the gathering agent dedicated to each site accessed extracts data from that site.
2. The Portal of claim 1 further comprising a configuration and initiation interface for the person to set up and start a gathering cycle.
3. The Portal of claim 1 wherein the data gathered by the gathering agents is summarized and/or aggregated at the portal to be provided to the person.
4. The Portal of claim 1 wherein the data gathered by the path agents is data specific to the person.
5. The Portal of claim 1 wherein the portal stores user names and passwords for the person for each Internet site visited and uses the stored user games and passwords to authenticate to each site as the person.
6. The Portal of claim 1 wherein the gathering agents comprise a parsing process in searching the accessed sites for data.
7. In an Internet Portal system, a method for gathering data specific to a person from a plurality of Internet sites storing data specific to that person, the method comprising the steps of:
  - (a) initiating a gathering cycle accessing individual ones of the plurality of sites;
  - (b) authenticating to the sites as the person; and
  - (c) executing a software gathering agent at each site accessed to gather data from the site, the gathering agent dedicated to each site accessed.
8. The method of claim 7 wherein the Portal further comprises a configuration and initiation interface, and further comprising a step for the person to configure and initiate a gathering cycle through the interface.
9. The method of claim 7 further comprising a step for summarizing at the Portal the data gathered by the gathering agents, the resulting summary to be provided to the person.
10. The method of claim 7 wherein the data gathered by the gathering agents is specific to the person.
11. The method of claim 7 wherein in step (a) the portal stores user names and passwords for the person for each Internet site visited, and uses the stored user names and passwords to authenticate to each site as the person.
12. The method of claim 7 wherein in step (c) the gathering agents comprise a parsing process in searching the accessed sites for data.

\* \* \* \* \*

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,199,077 B1  
DATED : March 6, 2001  
INVENTOR(S) : Suman Kumar Inala et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

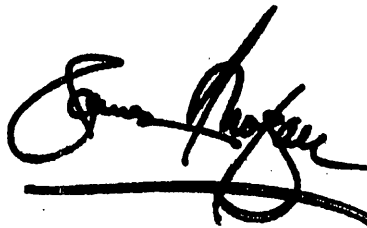
Title page,

Item [75], Inventor, now reads: "**Suman Kumar Inala**, Santa Clara;  
**P Venkat Rangan**, San Diego;  
**Ramakrishna Satyavolu**, Santa Clara,  
all of CA (US)"

should read: -- **Suman Kumar Inala**, Santa Clara;  
**P Venkat Rangan**, San Diego;  
**Ramakrishna Satyavolu**, Santa Clara,  
**Sreeranga Prasannakumar Rajan**, Santa Clara  
all of CA (US) --

Signed and Sealed this

Eighteenth Day of February, 2003



JAMES E. ROGAN  
*Director of the United States Patent and Trademark Office*



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Bib Data Sheet

CONFIRMATION NO. 9389

<b>SERIAL NUMBER</b> 09/323,598	<b>FILING DATE</b> 06/01/1999 <b>RULE</b>	<b>CLASS</b> 707	<b>GROUP ART UNIT</b> 2176	<b>ATTORNEY DOCKET NO.</b> P3902
<b>APPLICANTS</b> SUMAN KUMAR INALA, SANTA CLARA, CA; P. VENKAT RANGAN, SAN DIEGO, CA; RAMAKRISHNA SATYAVOLU, SANTA CLARA, CA; Sreeranga Prasannakumar Rajar, Santa Clara, CA;				
** CONTINUING DATA ***** THIS APPLICATION IS A CIP OF 09/208,740 12/08/1998				
** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY ** ** 06/28/1999				
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY CA	SHEETS DRAWING 6	TOTAL CLAIMS 12
Verified and Acknowledged	Examiner's Signature _____ Initials _____	INDEPENDENT CLAIMS 2		
<b>ADDRESS</b> 24739				
<b>TITLE</b> SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION				
<b>FILING FEE RECEIVED</b> 380	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

SERIAL NUMBER 09/323,598	FILING DATE 06/C1/99	CLASS 701	GROUP ART UNIT 3661	ATTORNEY DOCKET NO. P3902
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APPLICANT JUMAN KUMAR INALA, SANTA CLARA, CA; P. VENKAT RANGAN, SAN DIEGO, CA;  
RAMAKRISHNA SATYAVOLU, SANTA CLARA, CA.

\*\*CONTINUING DOMESTIC DATA\*\*\*\*\*  
VERIFIED THIS APPLN IS A CIP OF 09/208,740 12/08/98

*H Yes*

\*\*371 (NAT'L STAGE) DATA\*\*\*\*\* NONE

VERIFIED  
*MJR*

\*\*FOREIGN APPLICATIONS\*\*\*\*\* NONE

VERIFIED  
*MJR*

IF REQUIRED, FOREIGN FILING LICENSE GRANTED 06/28/99 \*\* SMALL ENTITY \*\*

Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> Met after Allowance	STATE OR COUNTRY CA	SHEETS DRAWING 6	TOTAL CLAIMS 12	INDEPENDENT CLAIMS 2
Verified and Acknowledged	<i>MJR</i> Examiner's initials	Initials				

ADDRESS DONALD R BOYS  
P O BOX 187  
AROMAS CA 95004

TITLE ~~METHOD AND APPARATUS FOR OBTAINING AND PRESENTING WEB SOMETHING TO~~  
USERS- SERVEY-SIDE WEB SUMMARY GENERATION AND PRESENTATION

FILING FEE RECEIVED \$380	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.15 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
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PATENT APPLICATION SERIAL NO. \_\_\_\_\_

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE  
FEE RECORD SHEET

06/14/1999 MVILLARI 00000006 09323598

01 FC:201

380.00 OP

PTO-1556  
(5/87)

\*U.S. GPO: 1988-433-214/80404

06/01/99  
1665 U.S. PTO

Please type a plus sign (+) inside this box →

Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	P3902
First Inventor or Application Identifier	Suman Kumar Inala et al.
Title	Method and Apparatus for Obtaining and Presenting WEB Summaries to Users
Express Mail Label No.	EJ499639937US

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.

**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

- \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
- Specification (Total Pages   
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross References to Related Applications,
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the invention
  - Brief Summary of the invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) (Total Sheets   
  - Newly executed (original or copy)
  - Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
    - DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
- Oath or Declaration (Total Pages   
  - Newly executed (original or copy)
  - Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
    - DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

- Microfiche Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - Computer Readable Copy
  - Paper Copy (identical to computer copy)
  - Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

- Assignment Papers (cover sheet & document(s))
- 37 C.F.R. § 3.73(b) Statement (when there is an assignee)  Power of Attorney.
- English Translation Document (if applicable)
- Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
- Preliminary Amendment
- Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
- \* Small Entity Statement(s)  Statement filed in prior application, Status still proper and desired (PTO/SB/09-12)
- Certified Copy of Priority Document(s) (if foreign priority is claimed)
- Other: Check for fees

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:
- Continuation  Divisional  Continuation-in-part (CIP) of prior application No: 09 / 208,740
- Prior application information: Examiner Not Yet Assigned Group / Art Unit: 2776

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**17. CORRESPONDENCE ADDRESS**

Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here) or  Correspondence address below

Name	Donald R. Boys of Central Coast Patent Agency				
Address	P.O. Box 187				
City	Aromas	State	CA.	Zip Code	95004
Country	US	Telephone	831-726-1457	Fax	831-726-3475

Name (Print/Type)	Donald R. Boys	Registration No. (Attorney/Agent)	35074
Signature	<i>Donald R. Boys</i>	Date	06/01/1999

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.



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<h2 style="margin: 0;">FEE TRANSMITTAL</h2> <p style="font-size: small; margin: 5px 0;">Note: Effective October 1, 1997. Patent fees are subject to annual revision.</p>	Complete if Known	
	Application Number	NA
	Filing Date	NA
	First Named Inventor	Sumar Kumar Inala et al.
	Group Art Unit	NA
	Examiner Name	NA
	Attorney Docket Number	P3902
TOTAL AMOUNT OF PAYMENT (\$) <b>380.00</b>		

**METHOD OF PAYMENT (check one)**

1.  The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number: \_\_\_\_\_  
 Deposit Account Name: \_\_\_\_\_

Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17       Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance

2.  Payment Enclosed:  
 Check     Money Order     Other

FEE CALCULATION

**1. FILING FEE**

Large Entity Code (\$)	Small Entity Code (\$)	Fee Description	Fee Paid
101 760	201 380	Utility filing fee	380.00
106 330	206 185	Design filing fee	
107 540	207 270	Plant filing fee	
108 790	208 395	Reissue filing fee	
114 150	214 75	Provisional filing fee	
<b>SUBTOTAL (1)</b>			<b>(\$) 380.00</b>

**2. CLAIMS**

Total Claims	Extra	Fee from below	Fee Paid
12 - 20 =	0	X 09 =	0.
Independent Claims 2 - 3 =	0	X 39 =	0.
Multiple Dependent Claims		X	

Large Entity Code (\$)	Small Entity Code (\$)	Fee Description	Fee Paid
103 18	203 09	Claims in excess of 20	
102 78	202 39	Independent claims in excess of 3	
104 270	204 135	Multiple dependent claim	
109 82	209 41	Reissue independent claims over original patent	
110 22	210 11	Reissue claims in excess of 20 and over original patent	
<b>SUBTOTAL (2)</b>			<b>(\$) 0.</b>

FEE CALCULATION (continued)

**3. ADDITIONAL FEES**

Large Entity Code (\$)	Small Entity Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet.	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 400	216 200	Extension for reply within second month	
117 950	217 475	Extension for reply within third month	
118 1,510	218 755	Extension for reply within fourth month	
128 2,060	228 1,030	Extension for reply within fifth month	
119 310	219 155	Notice of Appeal	
120 310	220 155	Filing a brief in support of an appeal	
121 270	221 135	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,320	241 660	Petition to revive - unintentional	
142 1,320	242 660	Utility issue fee (or reissue)	
143 450	243 225	Design issue fee	
144 670	244 335	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt.	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 790	246 395	Filing a submission after final rejection (37 CFR 1.129(a))	
149 790	249 395	For each additional invention to be examined (37 CFR 1.129(b))	
Other fee (specify) _____			
Other fee (specify) _____			
<b>SUBTOTAL (3)</b>			<b>(\$) 0.</b>

SUBMITTED BY		Complete (if applicable)	
Typed or Printed Name	Donald R. Boys	Reg. Number	35,074
Signature		Date	06/01/1999
		Deposit Account User ID	

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## Certificate of Express Mailing

"Express Mail" Mailing Label Number: EJ499639937US

Date of Deposit: 06/01/1999

Re: Case: P3902

Serial Number: NA

Filed: 06/01/1999

Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner of Patents and Trademarks, Washington D.C. 20231

1. Utility patent application transmittal.
2. 36 sheets of specification.
3. 6 sheets of drawings.
4. Declaration and Power of Attorney.
5. Verified statement claiming small entity status.
6. Fee transmittal.
7. Duplicate fee transmittal.
8. Check for fees in the amount of 380.00.
9. Certificate of express mailing.
10. Postcard listing contents.

Mark A. Boys

(Typed or printed name of person mailing paper or fee)

  
(Signature of person mailing paper or fee)

5  
su

~~Method and Apparatus for Obtaining and Presenting  
WEB Summaries to Users~~  
by inventors  
Sam Inala, Venkat Rangan & Ramakrishna Satyavolu

10

Field of the Invention

15

The present invention is in the field of Internet navigation including various communication means and connection technologies and pertains more particularly to methods and apparatus, including software, for gathering summary information from users or enterprise-selected WEB sites and presenting the information as HTML to the user using either a push or pull technology.

20

Cross-Reference to Related Documents

25

The present invention is a continuation in part (CIP) to patent application S/N 09/208,740 entitled "*Method and Apparatus for Providing and Maintaining a User-Interactive Portal System Accessible via Internet or other Switched-Packet-Network*" filed on 12/08/98, <sup>pending</sup> disclosure of which is incorporated herein in its entirety herein by reference.

Handwritten signature: J. Satyavolu

30

Background of the Invention

The information network known as the World Wide Web (WWW), which is a subset of the well-known Internet, is arguably the most complete source of publicly accessible information available. Anyone with a suitable

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Internet appliance such as a personal computer with a standard Internet connection may access (go on-line) and navigate to information pages (termed web pages) stored on Internet-connected servers for the purpose of garnering information and initiating transactions with hosts of such servers and pages.

Many companies offer various subscription services accessible via the Internet. For example, many people now do their banking, stock trading, shopping, and so forth from the comfort of their own homes via Internet access. Typically, a user, through subscription, has access to personalized and secure WEB pages for such functions. By typing in a user name and a password or other personal identification code, a user may obtain information, initiate transactions, buy stock, and accomplish a myriad of other tasks.

One problem that is encountered by an individual who has several or many such subscriptions to Internet-brokered services is that there are invariably many passwords and/or log-in codes to be used. Often a same password or code cannot be used for every service, as the password or code may already be taken by another user. A user may not wish to supply a code unique to the user such as perhaps a social security number because of security issues, including quality of security, that may vary from service to service. Additionally, many users at their own volition may choose different passwords for different sites so as to have increased security, which in fact also increases the number of passwords a user may have.

Another issue that can plague a user who has many passworded subscriptions is the fact that they must bookmark many WEB pages in a computer cache so that they may quickly find and access the various services. For example, in order to reserve and pay for airline travel, a user must connect to the Internet, go to his/her book-marks file and select an airline page. The user then has to enter a user name and password, and

follow on-screen instructions once the page is delivered. If the user wishes to purchase tickets from the WEB site, and wishes to transfer funds from an on-line banking service, the user must also look for and select the personal bank or account page to initiate a funds transfer for the tickets. Different user names and passwords may be required to access these other pages, and things get quite complicated.

Although this preceding example is merely exemplary, it is generally known that much work related to finding WEB pages, logging in with passwords, and the like is required to successfully do business on the WEB.

A service known to the inventor and described in the related case listed under the cross-reference to related documents section provides a WEB service that allows a user to store all of his password protected pages in one location such that browsing and garnering information from them is much simplified. A feature of the above service allows a user to program certain tasks into the system such that requested tasks are executed by an agent (software) based on user instruction. The service stores user password and log-in information and uses the information to log-in to the user's sites, thus enabling the user to navigate without having to manually input log-in or password codes to gain access to the links.

The above-described service uses a server to present a user-personalized application that may be displayed as an interactive home page that contains all of his listed sites (hyperlinks) for easy navigation. The application lists the user's URL's in the form of hyperlinks such that a user may click on a hyperlink and navigate to the page wherein login, if required, is automatic, and transparent to the user.

The application described above also includes a software agent that may be programmed to perform scheduled tasks for the user including returning specific summaries and updates about user-account pages. A search function is provided and adapted to cooperate with the software

agent to search user-entered URL's for specific content if such pages are cached somewhere in their presentable form such as at the portal server, or on the client's machine.

In addition to the features described above, it is desirable that the software agent in conjunction with the search function be enabled to navigate to any URL or group of URL's, provided as input by a user or otherwise deemed appropriate by the service provider, for the purpose of providing summary information regarding updated content for each URL, which may be presented as an HTML information-page to the user.

What is clearly needed is a method and apparatus that can independently navigate to user-supplied or known URL's, login with the appropriate password information at each URL (if required), and return requested summary information to a user in the form of a human and machine-readable HTML document. Such a system would provide an effective summarization service wherein important information may be presented to a user without requiring that the user invoke hyperlinks at his personal portal home page.

### Summary of the Invention

In a preferred embodiment of the present invention an Internet Portal is provided, comprising an Internet-connected server; and a portal software executing on the server, including a summary software agent. The Portal maintains a list of Internet destinations specific for a subscriber, and the summary software agent accesses the Internet destinations, retrieves information according to pre-programmed criteria, and summarizes the retrieved information for delivery to the subscriber.

In one embodiment the Portal further comprises a configuration and initiation interface for a subscriber to set up and start a summary search, and summary searches may be configured for individual clients as templates stored and retrieved at the Internet-connected server. In some cases  
5 summary information is stored to be later downloaded at request of the subscriber, and in others the information is immediately pushed to the client. Also in some embodiments autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal.

10 Methods for practicing the invention in several embodiments are provided as well in the descriptions that follow, and for the first time a system is enabled allowing subscribers to quickly access multiple WEB sites without lengthy log-in procedures, and to also summarize and download the data resulting from a summary search.

DR Brief Description of the Drawing Figures

20 Fig. 1 is an overview of an Internet portal system and network according to an embodiment of the present invention.

Fig. 2 is an exemplary plan view of a personalized Portal home page application as it may be seen on a display monitor according to an embodiment of the present invention.

25 Fig. 3 is a flow diagram illustrating user interaction with the Internet portal of fig. 1.

Fig. 4 is a block diagram illustrating a summarization software agent and capabilities thereof according to an embodiment of the present invention.

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Fig. 5 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of Fig. 4 operating in a user-defined mode.

5 Fig. 6 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of Fig. 4 in a User-independent smart mode with minimum user input.

10 DE Description of the Preferred Embodiments

According to a preferred embodiment of the present invention, a unique Internet portal is provided and adapted to provide unique services to users who have obtained access via an Internet or other network connection from an Internet-capable appliance. Such an interface provides users with a method for storing many personal WEB pages and further provides search function and certain task-performing functions. The methods and apparatus of the present invention are taught in enabling detail below.

15 Fig. 1 is an overview of an Internet portal system 11 and Internet network 13 according to an embodiment of the present invention. Portal system 11, in this embodiment, operates as an ISP in addition to a unique network portal, but may, in other embodiments be implemented as a stand-alone Internet server. In yet other embodiments the service and apparatus described herein may also be provided by such as a search and listing service (AltaVista™, Yahoo™) or by any other enterprise hosting a WEB-connected server.

20 Internet 13 is representative of a preferred use of the present invention, but should not be considered limiting, as the invention could apply in other networks and combinations of networks.

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ISP 15 in this embodiment comprises a server 31, a modem bank 33, represented here by a single modem, and a mass storage repository 29 for storing digital data. The modem bank is a convenience, as connection to the server could be by another type of network link. ISP 15, as is typical in the art, provides Internet access services for individual subscribers. In addition to well-known Internet access services, ISP 15 also provides a unique subscription service as an Internet portal for the purpose of storing many WEB pages or destinations along with any passwords and or personal codes associated with those pages, in a manner described in more detail below.

This unique portal service is provided by execution of Portal Software 35, which is termed by the inventors the Password-All suite. The software of the invention is referred to herein both as the Portal Software, and as the Password-all software suite. Also, in much of the description below, the apparatus of the invention is referred to by the Password-All terminology, such as *the Password-All Server or Password-All Portal*.

ISP 15 is connected to Internet 13 as shown. Other equipment known in the art to be present and connected to a network such as Internet 13, for example, IP data routers, data switches, gateway routers, and the like, are not illustrated here but may be assumed to be present. Access to ISP 15 is through a connection-oriented telephone system as is known in the art, or through any other Internet/WEB access connection, such as through a cable modem, special network connection (e.g. T1), ISDN, and so forth. Such connection is illustrated via access line 19 from Internet appliance 17 through modem bank 33.

In a preferred embodiment a user has access to Internet Password-All Portal services by a user name and password as is well known in the art, which provides an individualized WEB page to the subscriber. In another embodiment wherein a user has other individuals that use his or her Internet account, then an additional password or code unique to the user may be

required before access to portal 31 is granted. Such personalized Portal WEB pages may be stored in repository 29, which may be any convenient form of mass storage.

5 Three Internet servers 23, 25, and 27, are shown in Internet 13, and represent Internet servers hosted by various enterprises and subscribed to by a user operating appliance 17. For example, server 23 may be a bank server wherein interactive on-line banking and account managing may be performed. Server 25 may be an investment server wherein investment accounts may be created and managed. Server 27 may be an airline or travel  
10 server wherein flights may be booked, tickets may be purchased, and so on. In this example, all three servers are secure servers requiring user ID and password for access, but the invention is not necessarily limited to just secure services.

15 In a preferred embodiment of the present invention, a subscribing user operating an Internet-capable appliance, such as appliance 17, connects to Password-All Portal system 11 hosted by ISP 15, and thereby gains access to a personalized, interactive WEB page, which in turn provides access to any one of a number of servers on Internet 13 such as servers 23, 25, and 27, without being required to enter additional passwords or codes.

20 In a preferred embodiment the software that enables this service is termed Password-All by the inventors. Password-All may be considered to be a software suite executing on the unique server, and in some instances also on the user's station (client). Additional interactivity provided by portal software 35 allows a connected user to search his listed pages for  
25 information associated with keywords, text strings, or the like, and allows a user to program user-defined tasks involving access and interaction with one or more Internet-connected servers such as servers 23, 25, and 27 according to a pre-defined time schedule. These functions are taught in enabling detail below.

Fig. 2 is an illustration of a personalized portal page as may be seen on a display monitor according to an embodiment of the present invention, provided by Password-All Portal software 35 executing on server 31, in response to secure access by a subscriber. Page 32 presents an interactive listing 34 of user-subscribed or member WEB pages, identified in this example by URL, but which may also be identified by any convenient pseudonym, preferably descriptive, along with user name and typically encrypted password information for each page. Listed in a first column under *destination*, are exemplary destinations LBC.com, My Bank.com, My Stocks.com, My shopping.com, Mortgage.com, and Airline.com. These are but a few of many exemplary destinations that may be present and listed as such on page 33. In order to view additional listings listed but not immediately viewable from within application 33, a scroll bar 35 is provided and adapted to allow a user to scroll up or down the list to enable viewing as is known in the art.

Items listed in list 34 in this example may be considered destinations on such as servers 23, 25, and 27 of Fig. 1. Typically the URL associated with an item on this list will not take a user to a server, per se, but to a page stored on a server. User names and password data associated with each item in list 34 are illustrated in respective columns labeled *user name*, and *password*, to the right of the column labeled *destination*. Each listing, or at least a portion of each listing, is a hyperlink invoking, when selected, the URL to that destination. In some instances a particular service may have more than one associated URL. For example, My Bank.com may have more than one URL associated for such as different accounts or businesses associated also with a single subscriber. In this case there may be a sub-listing for different destinations associated with a single higher-level listing. This expedient is not shown, but given this teaching the mechanism will be apparent to those with skill in the art.



browser. A Password-All plug-in is provided wherein, after entering the required information for the new enterprise, the user may activate a pre-determined signal (right click, key stroke, etc.), and the Password-All suite will then enter a new passthrough in the user's Password. All profile at the  
5 Password-All Portal server.

In a related method for new entries, the enterprise hosting the Password-All Portal may, by agreement with other enterprises, provide login and sign-up services at the Password-All Portal, with most action transparent to the user. For example, there may be, at the Password-All  
10 Portal, a selectable browser list of cooperating enterprises, such as banks, security services, and the like, and a user having a Password-All Portal subscription and profile may select among such cooperating enterprises and open new accounts, which will simultaneously and automatically be added to the Password-All Portal page for the user and to the server hosted by the  
15 cooperating enterprise. There may be some interactivity required for different accounts, but in the main, much information from the user's profile may be used directly without being re-entered.

The inventors have anticipated that many potential users may well be suspicious of providing passwords and user names to an enterprise  
20 hosting a Password-All Portal Server executing a service like Password-All according to embodiments of the present invention. To accommodate this problem, in preferred embodiments, it is not necessary that the user provide the cleartext password to Password. All. Instead, an encrypted version of each password is provided. When a user links to his passthrough page in  
25 Password-All at the Password-All Portal server, when he/she invokes a hyperlink, the encrypted password is returned to the user's system, which then, by virtue of the kept encryption key or master password, invokes the true and necessary password for connection to the selected destination. It is thus not necessary that cleartext passwords be stored at the Password-All

Portal server, where they may be vulnerable to attack from outside sources, or to perceived misuse in other ways as well.

In a related safety measure, in a preferred embodiment of the invention, a user's complete profile is never stored on a single server, but is distributed over two or more, preferably more, servers, so any problem with any one server will minimize the overall effect for any particular user.

Password-All, as described above, allows a user to access a complete list of the user's usual cyberspace destinations, complete with necessary log-on data, stored in an encrypted fashion, so a user may simply select a destination (a hyperlink) in the Password-All list, and the user's browser then invokes the URL for the selected destination. In an added feature, Password-All may display banner ads and other types of advertisement during the navigation time between a hyperlink being invoked and the time the destination WEB page is displayed.

In yet another embodiment of the invention, a user/subscriber need not access the Password-All page to enjoy the advantages of the unique features provided. In this variation, a Plug-In is provided for the subscriber's WEB browser. If the subscriber navigates by use of the local browser to a WEB page requiring a secure log-in, such as his/her on-line banking destination, when the subscriber is presented with an input window for ID and Password, the plug in may be activated by a predetermined user input, such as a hot key or right click of the mouse device. The plug-in then accesses, transparently, the Password-All page (which may be cached at the client), and automatically accesses and provides the needed data for log-on.

In yet another aspect of the invention a search option allows a user to search list 34 for specific URL's based on typed input such as keywords or the like. In some cases, the number of URL's stored in list 34 can be extensive making a search function such as function 37 an attractive option. A criteria dialog box 51 illustrated as logically separated from and

below list 34 is provided and adapted to accept input for search option 37 as is known in the art. In one embodiment, search option 37 may bring up a second window wherein a dialog box such as box 51 could be located.

In another aspect of the invention the search function may also be  
5 configured in a window invoked from window 33, and caused to search all or selected ones of listed destinations, and to return results in a manner that may be, at least to some extent, configured by a user. For example, a dialog box may be presented wherein a user may enter a search criteria, and select among all of the listed destinations. The search will then be access each of  
10 the selected destinations in turn, and the result may be presented to the user as each instance of the criteria is found, or results may be listed in a manner to be accessed after the search.

Preferably the search function is a part of the Password-All Portal software, available for all users, and may be accessed by hyperlinks in user's  
15 personal pages. In some embodiments users may create highly individualized search functions that may be stored in a manner to be usable only by the user who creates such a function.

In many aspects of the present invention, knowledge of specific WEB pages, and certain types of WEB pages, is highly desirable. In many  
20 embodiments characteristics of destination WEB pages are researched by persons (facilitators) maintaining and enhancing Password-All Portal software 35, and many characteristics may be provided in configuration modules for users to accomplish specific tasks. In most cases these characteristics are invoked and incorporated transparent to the user.

In yet another aspect of the present invention, the Password-All suite is structured to provide periodic reports to a user, in a manner to be  
25 structured and timed by the user, through the user's profile. For example, reports of changes in account balances in bank accounts, stock purchases, stock values, total airline travel purchases, frequent-flier miles, and the like

may be summarized and provided to the users in many different ways. Because the Password-All Portal server with the Password-All software site handles a broad variety of transactional traffic for a user, there is an opportunity to summarize and collect and process statistics in many useful ways. In preferred embodiments of the invention such reports may be furnished and implemented in a number of different ways, including being displayed on the user's secure personal WEB page on the Password-All Portal.

In addition to the ability of performing tasks as described above, task results including reports, and hard documents such as airline tickets may be sent over the Internet or other data packet-networks to user-defined destinations such as fax machines, connected computer nodes, e-mail servers, and other Internet-connected appliances. All tasks may be set-up and caused to run according to user-defined schedules while the user is doing something else or is otherwise not engaged with the scheduled task.

In another embodiment of the present invention, recognizing the increasing use of the Internet for fiscal transactions, such as purchasing goods and services, a facility is provided in a user's profile to automatically track transactions made at various destinations, and to authorize payment either on a transaction-by-transaction basis, or after a session, using access to the user's bank accounts, all of which may be pre-programmed and authorized by the user.

Other functions or options illustrated as part of application 35 include a last URL option 41, an update function 43, and an add function 45. Function 41 allows a user to immediately navigate to a last visited URL. Update function 43 provides a means of updating URL's for content and new address. An add function enables a user to add additional URL's to list 34. Similarly, function 45 may also provide a means to delete entries. Other ways to add accounts are described above. It should be noted that the



services provided by the unique Password-All Portal in embodiments of the present invention, and by the Password-All software suite are not limited to destinations requiring passwords and user names. The Password-All Portal and software in many embodiments may also be used to manage all of a user's bookmarks, including editing of bookmarks and the like. In this aspect, bookmarks will typically be presented in indexed, grouped, and hierarchical ways.

There are editing features provided with Password-All for adding, acquiring, deleting, and otherwise managing bookmarks. As a convenience, in many embodiments of the invention, bookmarks may be downloaded from a user's Password-All site, and loaded onto the same user's local browser. In this manner, additions and improvements in the bookmark set for a user may be used without the necessity of going to Password-All. Further, bookmarks may be uploaded from a user's local PC to his/her home page on the Password-All site by use of one or more Password-All plug-ins.

It will be apparent to the skilled artisan, given the teaching herein, that the functionality provided in various embodiments of the invention is especially applicable to Internet-capable appliances that may be limited in input capability. For example, a set-top box in a WEB TV application may well be without a keyboard for entering IDs and Passwords and the like. In practice of the present invention keyboard entry is minimized or eliminated. The same comments apply to many other sorts of Internet appliances.

In preferred embodiments of the invention, once a subscriber-user is in Password-All, only an ability to point-and-click is needed for all navigation. To get into the Password-All site, using a limited apparatus, such as an appliance without a keyboard or keypad, a Smartcard or embedded password may be used, or some other type of authentication.

It will be apparent to one with skill in the art that an interactive application such as application 33 may be provided in a form other than a

WEB page without departing from the spirit and scope of the present invention. For example, an application such as application 33 may be provided as a downloadable module or program that may be set-up and configured off-line and made operational when on-line.

5 Fig. 3 is a flow diagram illustrating user interaction with the Internet Password-All Portal of fig. 1. The following process steps illustrated, according to an embodiment of the present invention, are intended to illustrate exemplary user-steps and automated software processes that may be initiated and invoked during interaction with an Internet portal of the present invention such as portal 31 of Fig. 1. In step 53 a user connects to the Internet or another previously described switched-packet network via a compatible appliance such as Internet appliance 17 of Fig. 1.

10 At step 55, a user enters a user-name and password, which, in one embodiment, may simply be his ISP user name and password. In another embodiment, a second password or code would be required to access an Internet portal such as portal server 31 of Fig. 1 after logging onto the Internet through the ISP. In some cases, having a special arrangement with the ISP, there may be one password for both Internet access through the ISP and for Password-All. At step 57 a personal WEB page such as page 32 of Fig. 2 is displayed via Internet portal server 31. At minimum, the personalized WEB page will contain all user configured URL's, and may also be enhanced by a search function, among other possibilities.

15 At step 58 a user will, minimally, select a URL from his or her bookmarked destinations, and as is known by hyperlink technology, the transparent URL will be invoked, and the user will navigate to that destination for the purpose of normal user interaction. In this action, the Password-All Portal software transparently logs the user on to the destination page, if such log-on is needed.

At step 60 the user invokes a search engine by clicking on an option such as described option 37 of Fig. 2. At step 62, the user inputs search parameters into a provided text field such as text field 51 of Fig. 2. After inputting such parameters, the user starts the search by a button such as button 52. The search engine extracts information in step 64. Such information may be, in one option, of the form of URL's fitting the description provided by search parameters. A searched list of URL's may be presented in a separate generated page in step 66 after which a user may select which URL to navigate to. In an optional search function, the user may provide search criteria, and search any or all of the possible destinations for the criteria.

In another embodiment wherein WEB pages are cached in their presentable form, information extracted in step 64 may include any information contained in any of the stored pages such as text, pictures, interactive content, or the like. In this case, one displayed result page may provide generated links to search results that include the URL associated with the results. Perhaps by clicking on a text or graphic result, the associated WEB page will be displayed for the user with the result highlighted and in view with regards to the display window.

#### **Enhanced Agent for WEB Summaries**

In another aspect of the present invention, a software agent, termed a gatherer by the inventors, is adapted to gather and return summary information about URL's according to user request or enterprise discretion. This is accomplished in embodiments of the present invention by a unique scripting and language parsing method provided by the inventor wherein human knowledge workers associated with the service provide written scripts to such a gatherer according to subscriber or enterprise directives.

Such a software gatherer, and capabilities thereof, is described in enabling detail below.

Referring now to Fig. 1, there is illustrated an exemplary architecture representing a portal service-network which, in this case is hosted by ISP 15. Portal software 35 in this embodiment executes on portal server 31 set-up at the ISP location. Mass repository 29 is used for storing subscriber information such as passwords, login names, and the like. Internet servers 23, 25, and 27 represent servers that are adapted to serve WEB pages of enterprises patronized by a subscriber to the portal service such as one operating Internet appliance 17.

The main purpose of portal software 35 as described above with reference to Fig. 2, is to provide an interactive application that lists all of the subscriber's WEB sites in the form of hyperlinks. When a user invokes a hyperlink from his personal list, software 35 uses the subscriber's personal information to provide an automatic and transparent login function for the subscriber while jumping the subscriber to the subject destination.

Referring again to Fig. 2, an interactive list 34 containing user-entered hyperlinks and a set of interactive tools is displayed to a subscriber by portal software 35 of Fig. 1. One of the tools available to a subscriber interacting with list 34 is agent (software) 39. Agent 39 may be programmed to perform certain tasks such as obtaining account information, executing simple transactions, returning user-requested notification information about upcoming events, and so on. Search function 37 and update function 43 may be integrated with agent 39 as required to aid in functionality.

It is described in the above disclosure that agent 39 may, in some embodiments, search for and return certain summary information contained on user-subscribed WEB pages, such as account summaries, order tracking information and certain other information according to user-defined

parameters. This feature may be programmed by a user to work on a periodic time schedule, or on demand.

In the following disclosure, enhancements are provided to agent 39. Such enhancements, described in detail below, may be integrated into agent 39 of portal software 35 (Fig.'s 1 and 2); and may be provided as a separate agent or gatherer to run with portal software 35; or may, in some embodiments, be provided as a standalone service that is separate from portal software 35.

Fig. 4 is a block diagram illustrating a summarization software agent 67 and various capabilities and layers thereof according to an embodiment of the present invention. Summarization agent 67, hereinafter termed gatherer 67, is a programmable and interactive software application adapted to run on a network server. Gatherer 67 may, in one embodiment, be integrated with portal software 35 of Fig. 1 and be provided in the form of a software module separate from agent 39 (Fig. 2). In another embodiment, gatherer 67 may be a part of agent 39 as an enhancement to the function of that agent as previously described. In still another embodiment, gatherer 67 may be provided as a parent or client-side application controlled by a separate service from the portal service described above.

In this exemplary embodiment gatherer 67 is a multi-featured software application having a variety of sub-modules and interface modules incorporated therein to provide enhanced function. Gatherer 67 has a client/service interface layer 69 adapted to enable directive input from both a client (user) and a knowledge worker or workers associated with the service. A browser interface 77 is provided in layer 69, and adapted to provide access to application 67 from a browser running on a client's PC or other Internet or network appliance. Interface 77 facilitates bi-directional communication with a user's browser application (not shown) for the purpose of allowing the user to input summary requests into gatherer 67 and

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receive summary results. Interface 77 supports all existing network communication protocols such as may be known in the art, and may be adapted to support future protocols.

Layer 69 also comprises a unique input scripting module 79 that is adapted to allow a human knowledge worker to create and supply directive scripts containing the site logic needed by gatherer 67 to find and retrieve data from a WEB site. In this case, gatherer 67 executes and runs on a network server such as server 31 of Fig. 1. However, this is not required in order to practice the present invention.

It is assumed in this example that gatherer 67 is part of the portal software suite 35 running on server 31 of Fig. 1. Gatherer 67 may be provided as several dedicated agents, or as one multi-functional agent without departing from the spirit and scope of the present invention. For example, one gatherer 67 may be scripted and programmed to execute a single user request with additional gatherers 67 called upon to perform additional user-requests. Alternatively, one gatherer 67 may be dedicated and assigned to each individual user and adapted to handle all requests from that user.

Interface layer 69 facilitates exchange of information from both a client and a knowledge worker. A client operating a WEB browser with an appropriate plug-in is enabled to communicate and interact with gatherer 67. For example, a user may enter a request to return a summary of pricing for all apartments renting for under \$1000.00 per month located in a given area (defined by the user) from apartments.com (one of user's registered WEB sites). The just mentioned request would be categorized as either a periodic request, or a one time (on demand) request. The communicated request initiates a service action wherein a knowledge worker associated with the service uses module 79 to set-up gatherer 67 to perform it's function.

Module 79 is typically executed from a network-connected PC operated by the knowledge worker.

According to an embodiment of the present invention, a unique scripting method facilitated by module 79 is provided to enable gatherer 67 to obtain the goal information requested by a user. For example, the above mentioned example of WEB-site apartments.com has a specific HTML (hyper-text-markup-language) logic that it uses to create its site and post its information. Such site logic is relatively standard fare for a majority of different sites hosted by different entities. Using this knowledge, a knowledge worker creates a site-specific script or template for gatherer 67 to follow. Such a template contains descriptions and locations of the appropriate fields used, for example, at apartments.com. Apartment description, location, deposit information, rental information, agent contact information, and other related fields are matched in terms of location and label description on the template created with module 79. Completed templates are stored in a database contained in a storage facility such as, perhaps, repository 29 of Fig. 1. Such templates may be reused and may be updated (edited) with new data.

In one embodiment, one script may contain site logics for a plurality of WEB pages, and instructions for specific navigational instruction and password or login information may be contained therein and executed serially, such as one site at a time. It is important to note that the knowledge worker or workers may perform much of their scripting via automatic controls such as by object linking and embedding (OLE) and a minor portion of scripting may be performed manually in an appropriate computer language, many of which are known in the art).

Gatherer 67 also has a process layer 71 adapted for internal information gathering and parameter configuration. An optional portal server interface 81 is provided and adapted to allow <sup>gatherer</sup>gather 67 to provide

updated information to a user's list of hyperlinks and also to obtain data from portal server 31 if required. For example, required hyperlinks may be mirrored from a user's home page to a scripting template for navigational purposes. In an embodiment wherein gatherer 67 is part of a standalone service, a convention for providing user login information may be supplied at the client's end when a request is made. For example, an encrypted password may be supplied by a client plug-in and gatherer 67 may temporarily borrow the user's encryption key when auto login is performed.

An appliance configuration module 83 is provided and adapted to allow a user to define and configure an Internet appliance to communicate with the service and receive summary information. Such appliances may include but are not limited to palm top PC's, lap top PC's, cellular telephones, WEB TV's, and so on. Typically, a user will be presented a configuration WEB page from a network server that displays in his browser window on his desktop PC. The page contains an interface for communicating device parameters and communication protocol types to module 83. In this way, a user may configure a preferred device for receipt of summary information. Device parameters and communication protocols inherent to such a device are incorporated into the scripting of the site template and are used as instructions for WEB summary delivery.

A navigation layer 73 is provided and adapted to perform the function of external site navigation and data gathering for gatherer 67. To this end, a communication interface/browser control module 85 is provided and adapted to function as a WEB browser to access WEB sites containing WEB data. Control 85 receives it's instruction from the scripted template created by the knowledge worker.

A parsing engine 87 is provided and adapted to parse individual WEB sites according to a template created via scripting module 79. Parsing engine 87 may be a <sup>PERL</sup> Perl engine, an IE HTML engine, or any other or



combination of known parsing engines. The template (not shown) tells control 85 and parsing engine 87 where to go and what fields at the destination site to look for to access desired data. Once the data fields are located, parsing engine 87 gathers current data in the appropriate field, and returns that data to the service for further processing such as data conversion, compression and storage, and the like.

Because WEB sites use tools that use consistent logic in setting up their sites, this logic may be used by the summarization service to instruct control 83 and parsing engine 87. The inventor provides herein an exemplary script logic for navigating to and garnishing data from Amazon<sup>TM</sup>.com. The hyperlinks and/or actual URLs required for navigation are not shown, but may be assumed to be included in the template script. In this example, a company name Yodlee (known to the inventors) is used in the script for naming object holders and object containers, which are in this case Active X<sup>TM</sup> conventions. In another embodiment, Java<sup>TM</sup> script or another object linking control may be used. The scripted template logic example is as follows:

```
# Site amazon.orders.x - shows status of orders from Amazon
```

```
login( 7 );
```

```
get( "/exec/obidos/order-list/" );
```

```
my @tables = get_tables_containing_text( "Orders:" );
```

```
my $order_list = new Yodlee::ObjectHolder( 'orders' );
```

```
$order_list->source( 'amazon' );
```

```
$order_list->link_info( get_link_info() );
```

```
my @href_list;
```

```
my @container_list;
```

```
foreach my $table ( @tables ) {
```

```
    my @rows = get_table_rows();
```



```
foreach my $j ( 0 .. $#rows ) {  
    select_row( $j );  
  
    my $href = get_url_of_first_href( get_row() );  
5  
    next unless defined $href;  
  
    my @child_list = get_children( get_row(), 'a' );  
    next unless defined $child_list[ 0 ];  
10  
    my $text = get_text( $child_list[ 0 ] );  
  
    $container_list[ $i ]->description( $text );  
15  
}  
}  
}  
  
result( $order_list );
```

20 The above example is a script that instructs control 85 and parser 87 to navigate to and obtain data from Amazon™.com, specifically that data that reflects the user's current order status. Scripts may also be written to obtain virtually any type of text information available from any site. For example, a user may wish to obtain the New York Times headlines, the top  
25 ten performing stocks, a comparative list of flights from San Francisco to New York, etc. In one embodiment, metadata may be associated with and used in-place of the actual scripted language for the purpose of reducing complication in the case of many scripts on one template.

A data processing layer 75 is provided and adapted to store, process,  
30 and present returned data to users according to enterprise rules and client direction. A database interface module 89 is provided and adapted to provide access for gatherer 67 to a mass repository such as repository 29 of Fig. 1, for the purpose of storing and retrieving summary data, templates, presentation directives, and so on. Gatherer agent 67 may also access data  
35 through interface 89 such as profile information, user account and URL

information, stored site logics and so on. Data scanned from the WEB is stored in a canonical format in a database such as repository 29, or in another connected storage facility. All stored data is, of course, associated with an individual who requested it, or for whom the data is made available according to enterprise discretion.

A summarization page module 91 is provided and adapted to organize and serve a WEB summary page to a user. Module 91, in some embodiments, may immediately push a WEB summary to a user, or module 91 may store such summarized pages for a user to access via a pull method, in which case a notification may be sent to the user alerting him of the summary page availability. Summarization module 91 includes an HTML renderer that is able to format data into HTML format for WEB page display. In this way, e-mail messages and the like may be presented as HTML text on a user's summarization page. Moreover, any summary data from any site may include an embedded hyperlink to that site. In this way, a user looking at an e-mail text in HTML may click on it and launch the appropriate e-mail program. Other sites will, by default, be linked through the summary page.

Many users will access their summary data through a WEB page as described above, however, this is not required in order to practice the present invention. In some embodiments, users will want their summary information formatted and delivered to one of a variety of Internet-capable appliances such as a palm top or, perhaps a cell phone. To this end, the renderer is capable of formatting and presenting the summary data into a number of formats specific to alternative devices. Examples of different known formats include, but are not limited to XML, plain text, VoxML, HDML, audio, video, and so on.

In a preferred embodiment of the present invention, gather 67 is flexible in such a way as it may act according to enterprise rules, client

directives, or a combination of the two. For example, if a user makes a request for summary data about a user/subscribed WEB page to be periodically executed and presented in the form of a HTML document, then gather 67 would automatically access and analyze the required internal information and user provided information to formulate a directive. Using scripting module 79, a knowledge worker provides a template (if one is not already created for that site) that contains the "where to go" and "what to get" information according to site logic, user input, and known information.

Alternatively, if a user requests a summary about data on one of his sites such as, perhaps, current interest rates and re-finance costs at his mortgage site, the service may at it's own discretion provide an additional unsolicited summary from an alternate mortgage site for comparison. This type of summarization would be designed to enhance a user's position based on his profile information. In this case, updated data about latest interest rates, stock performances, car prices, airline ticket discounts, and so on would be stored by the service for comparative purposes. If a user request for a summary can be equaled or bettered in terms of any advantage to the user, such summary data may be included.

In many cases, created templates may be re-used unless a WEB site changes it's site logic parameters, in which case, the new logic must be accessed and any existing templates must be updated, or a new template may be created for the site. The templates contain site-specific script obtained from the site and stored by the knowledge workers. In one embodiment, companies hosting WEB pages automatically provide their site logics and any logic updates to the service by virtue of an agreement between the service and the WEB hosts.

In an alternative embodiment gatherer 67 may be implemented as a client application installed on a user's PC. In this embodiment, a user would not be required to supply log-in or password codes. Summarization

scripts may be sent to the client software and templates may be automatically created with the appropriate scripts using log-in and password information encrypted and stored locally on the user's machine.

In addition to providing WEB summary information, gatherer 67  
5 may also be used to provide such as automatic registration to new sites, and for updating old registration information to existing sites. For example, if a user wishes to subscribe, or register at a new site, only the identification of the site is required from the user as long as his pertinent information has not changed. If a new password or the like is required, gatherer 67 through  
10 control module 73 may present login or password codes from a list of alternative codes provided by a user. In another embodiment, a database (not shown) containing a wealth of password options may be accessed by gatherer 67 for the purpose of trying different passwords until one is accepted by the site. Once a password or log-in code is accepted, it may be  
15 sent to a user and stored in his password list and at the network level.

It will be apparent to one with skill in the art that a software application such as gatherer 67 may be implemented in many separate locations connected in a data network. For example, a plurality of gatherer applications may be distributed over many separate servers linked to one or  
20 more mass repositories. Client applications include but are not limited to a WEB-browser plug-in for communicating to the service. Plug-in extensions may also be afforded to proxy servers so that auto-login and data access may still be performed transparent to a user.

In another embodiment, plug-ins enabling communication with  
25 gatherer 67 may be provided and configured to run on other network devices for the purpose of enabling such a device to initiate a request and get a response without the need for a desktop computer.

In most embodiments a user operating a desktop PC will order a one time or periodic summary related to some or all of his subscribed WEB

sites. A logical flow of an exemplary request/response interaction is provided below.

Fig. 5 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of Fig. 4 operating in a user-defined mode. In step 93, a user has initiated a new request for a summary (summary order). It is assumed for the purpose of discussion, that the request of step 93 involves a site wherein no template has been created. In step 95, the request is received and analyzed. A knowledge worker will likely perform this step. The new request may be posted to the user's portal home page, sent directly to gatherer 67, or even communicated through e-mail or other media to the service.

In step 97 a knowledge worker accesses particular site logic associated with the request URLs. For example, if the request involves a plurality of URLs, then all site logics for those URLs are accessed. Logic may be available in a repository such as repository 29 of Fig. 1 if they were obtained at the time of user registration to a particular URL, or sent in by WEB-site hosts shortly after registration. If it is a completely new URL, then the logic must be obtained from the site. In most cases however, the logic will be known by virtue of a plurality of users accessing common URLs. Therefore cross-linking in a database of logic/user associations may be performed to access a logic for a site that is new to one particular user, but not new to another.

In step 99, the knowledge worker creates a template by virtue of scripting module 79 (Fig. 4) containing all site logic, URLs, log-in and password information, and the user request information. As described previously, templates may be re-used for a same request. In most cases, scripting may be mostly automated with minimum manual input performed by the knowledge worker. In many cases, an existing template will match a

new request exactly, and may be re-used. In that case steps 97, 99, and 101 would not be required.

In step 101 the template is stored and associated with the requesting user. The stored template may now be retrieved at a scheduled time for performing the summary gathering. At step 103, a browser control such as module 85 of Fig. 4 is activated to access the stored template and navigate to specified URLs for the purpose of gathering summary data. If a timing function is attributed to the template stored in step 101, then the template may self execute and call up the browser function. In another embodiment, the knowledge worker may notify the browser control to get the template for it's next task. In some embodiments, a plurality of controls may be used with one template as previously described.

In step 105, automatic log-in is performed, if required, to gain access to each specified URL. In step 107, a specified WEB-page is navigated to and parsed for requested data according to the logic on the template. If there are a plurality of WEB -pages to parse, then this step is repeated for the number of pages. A variety of parsing engines may be used for this process such as an IETM parser, or a PearlTM parser. Only the requested data is kept in step 107.

A request may be an on-demand request requiring immediate return, or a scheduled request wherein data may be posted. At step 109, such logic is confirmed. If the data is to be presented according to a periodic schedule, then summary data parsed in step 107 is stored for latter use in step 111. In step 113, the summary data is rendered as HTML if not already formatted, and displayed in the form of a summary WEB-page in step 115. The summary page may be posted for access by a user at a time convenient to the user (pull); or may be pushed as a WEB-page to the user and be made to automatically display on the user's PC. Notification of summary page availability may also be sent to a user to alert him of completion of order.



If the summary data is from a one-time on-demand request and required immediately by a user, then a network appliance and data delivery method (configured by the user) is confirmed, and the data is rendered in the appropriate format for delivery and display in step 117. In step 119, the summary data is delivered according to protocol to a user's designated appliance. In step 121 a user receives requested information in the appropriate format.

It will be apparent to one with skill in the art that there may be more or fewer logical steps as well as added sub-steps than are illustrated in this example. For example, step 105 may in other embodiments include sub-steps such as getting an encryption key from a user. In still another embodiment, part of a request may be rendered as HTML as in step 113 while certain other portions of the same request data might be rendered in another format and delivered via alternative methods. There are many possibilities.

The method and apparatus of the present invention may be used to present summaries to users without user input. Process logic such as this is detailed below.

Fig. 6 is a logical flow chart illustrating an exemplary summarization process performed by the software agent of Fig. 4 in a User-independent smart mode with minimum or no user input. In step 117 an enterprise-initiated summary process begins. In this case, the enterprise may be assisting a user in finding a better deal or, perhaps presenting the individual with summaries from and links to alternative pages not yet subscribed to by a user.

In step 119, a database containing user information and parameters is accessed and reviewed. Certain information specific to a user may be required to initiate an enterprise-sponsored summary report. At step 121, the knowledge worker accesses the site logic specific to the specified target

site or sites for summarization. In step 123, the knowledge worker modifies an existing user template, or creates a new one if necessary. At step 125 the template is stored in a repository such as repository 29 and associated with the user.

5 As described in Fig. 5, the template either self-executes according to a timed function and invokes a browser control such as control 85 (Fig. 4), or is accessed by control 85 as a result of task notification. In step 127, the browser control begins navigation. Auto logins are performed, if required, in step 129 to gain access to selected sites. If the WEB pages are new to a  
10 user, and the user has no registration with the WEB site, then through agreement, or other convention, the service may be provided access to such sites. Such an agreement may be made, for example, if the host of the WEB site realizes a possibility of gaining a new customer if the customer likes the summary information presented. In many other situations, no password or  
15 login information is required to obtain general information that is not personal to a client.

In step 131, all sites are parsed for summary data and stored in canonical fashion in step 133. At step 135, the data is compiled and rendered as HTML for presentation on a summary page. In step 137, a  
20 WEB summary containing all of the data is made available to a user and the user is notified of it's existence.

Providing certain information not requested by a user may aid in enhancing a user's organization of is current business on the WEB. Moreover, unsolicited WEB summaries may provide better opportunities  
25 than the current options in the user's profile. Of course, assisting a user in this manner will require that the enterprise (service) have access to the user's profile and existing account and service information with various WEB sites on the user's list. A user may forbid use of a user's personal information, in which case, no enterprise-initiated summaries would be



CM What is claimed is:

1. An Internet Portal, comprising:
  - an Internet-connected server; and
  - a portal software executing on the server, including a summary software agent;
    - wherein the Portal maintains a list of Internet destinations specific for a subscriber, and the summary software agent accesses the Internet destinations, retrieves information according to pre-programmed criteria, and summarizes the retrieved information for delivery to the subscriber.
2. The Portal of claim 1 further comprising a configuration and initiation interface for a subscriber to set up and start a summary search.
3. The Portal of claim 1 wherein the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server.
4. The Portal of claim 1 wherein information retrieved in a summary search is stored to be retrieved by the subscriber.
5. The Portal of claim 1 wherein information retrieved in a summary search is downloaded immediately to the subscriber.
6. The Portal of claim 1 wherein autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal.

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**Abstract of the Disclosure**

A portal server includes a software agent configured to do summary searches for subscribers based on Internet destinations provided by the subscribers, to retrieve information from such destinations based on pre-programmed site information, and to download the summary information to the subscriber. The destinations and the nature of the information to be retrieved is pre-programmed. There is further a configuration and initiation interface for a subscriber to set up and start a summary search. In some cases the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server. Also in some cases retrieved information is immediately sent to the subscriber, and in other situations such information is saved at the portal to be retrieved by a subscriber at a later time. In preferred embodiments of the invention autologins are accomplished for a subscriber at Internet destinations by use of pre-stored configuration information.

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PRINT OF DRAWINGS  
AS ORIGINALLY FILED

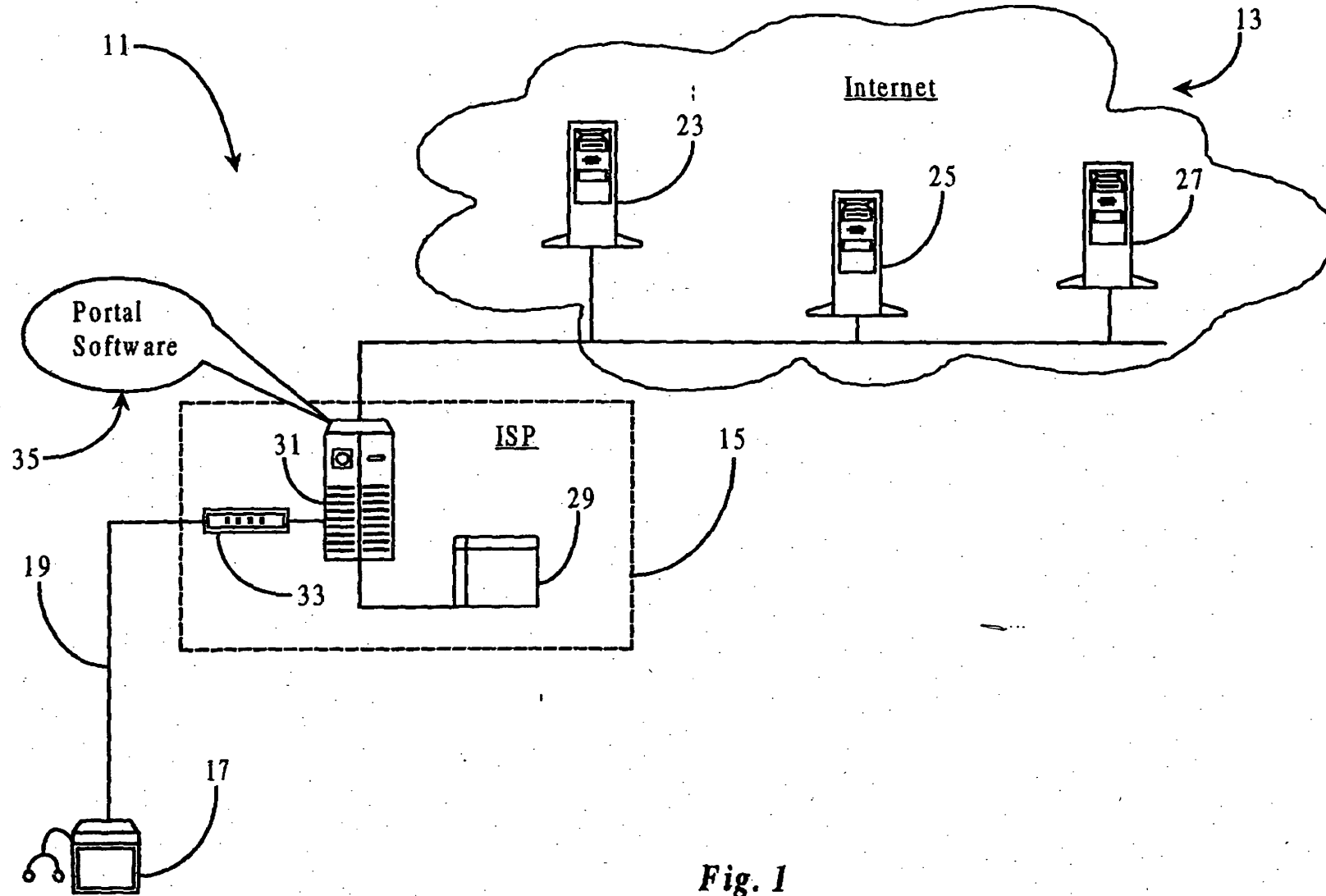


Fig. 1

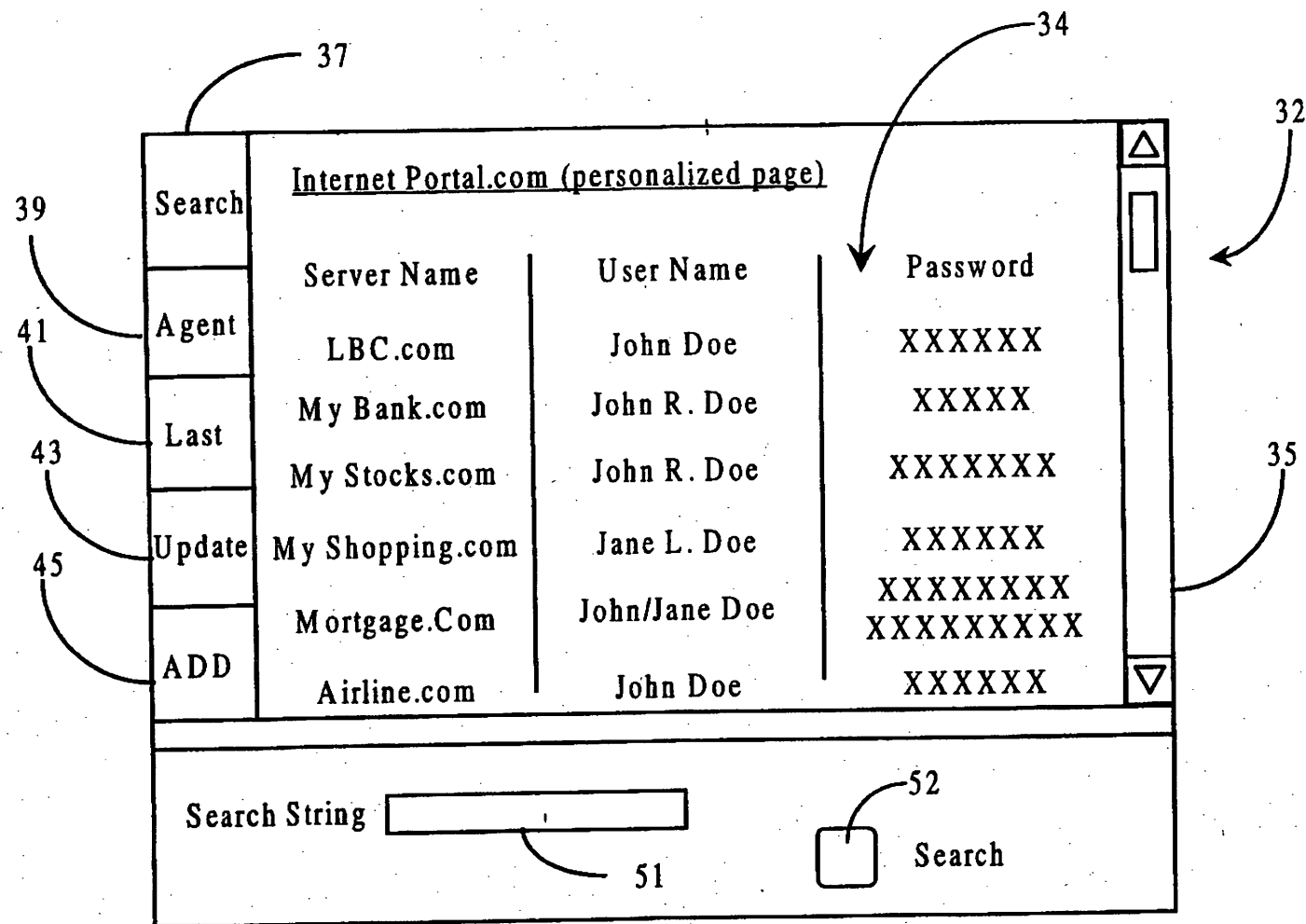


Fig. 2



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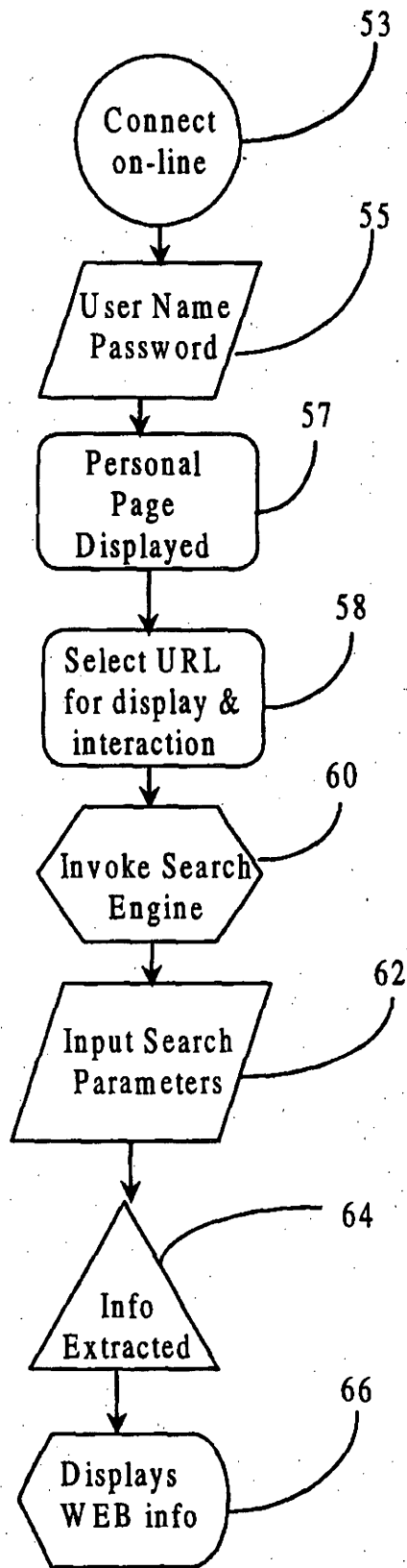
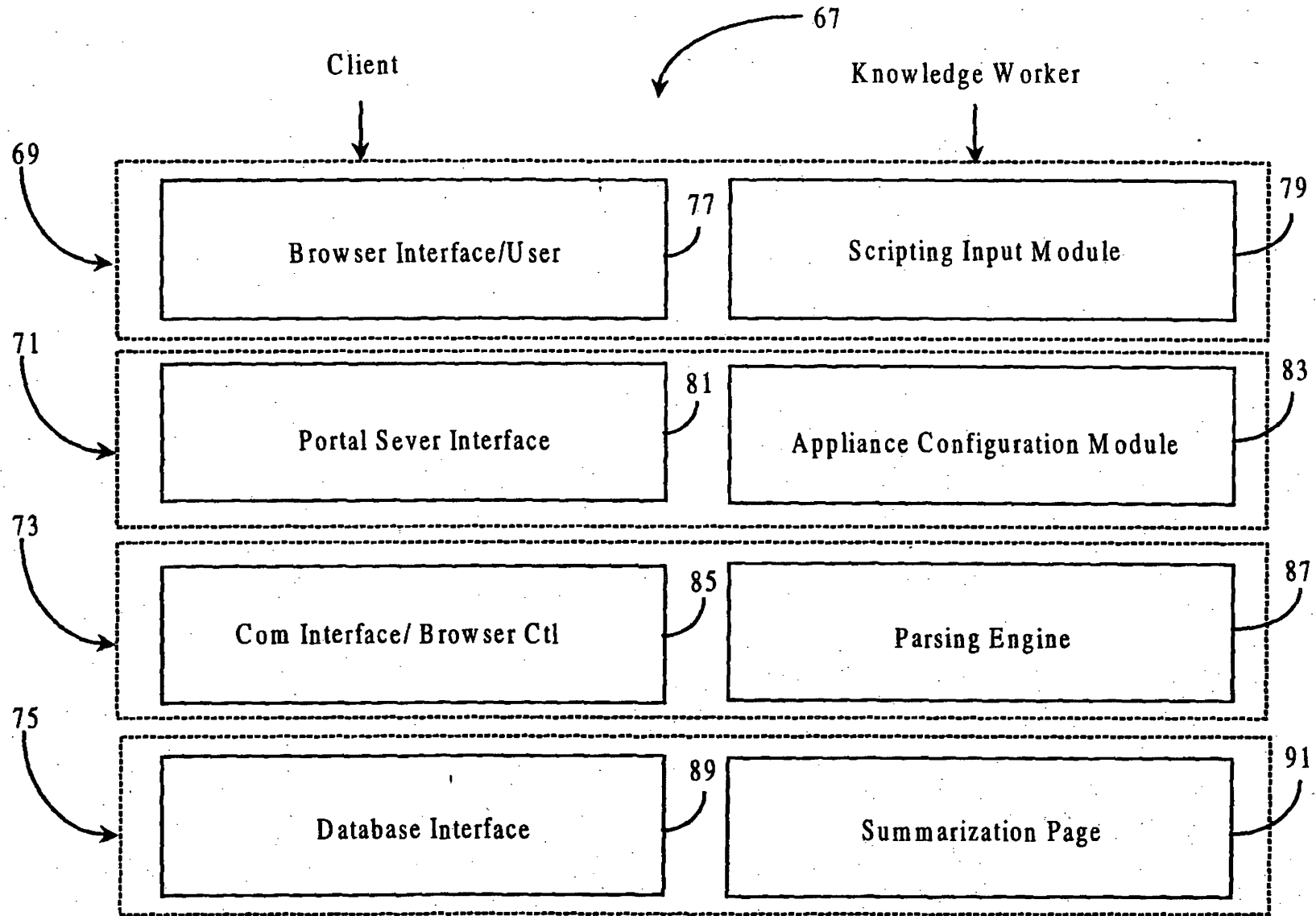


Fig. 3

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AS ORIGINALLY FILED

Fig. 4

067050 065220

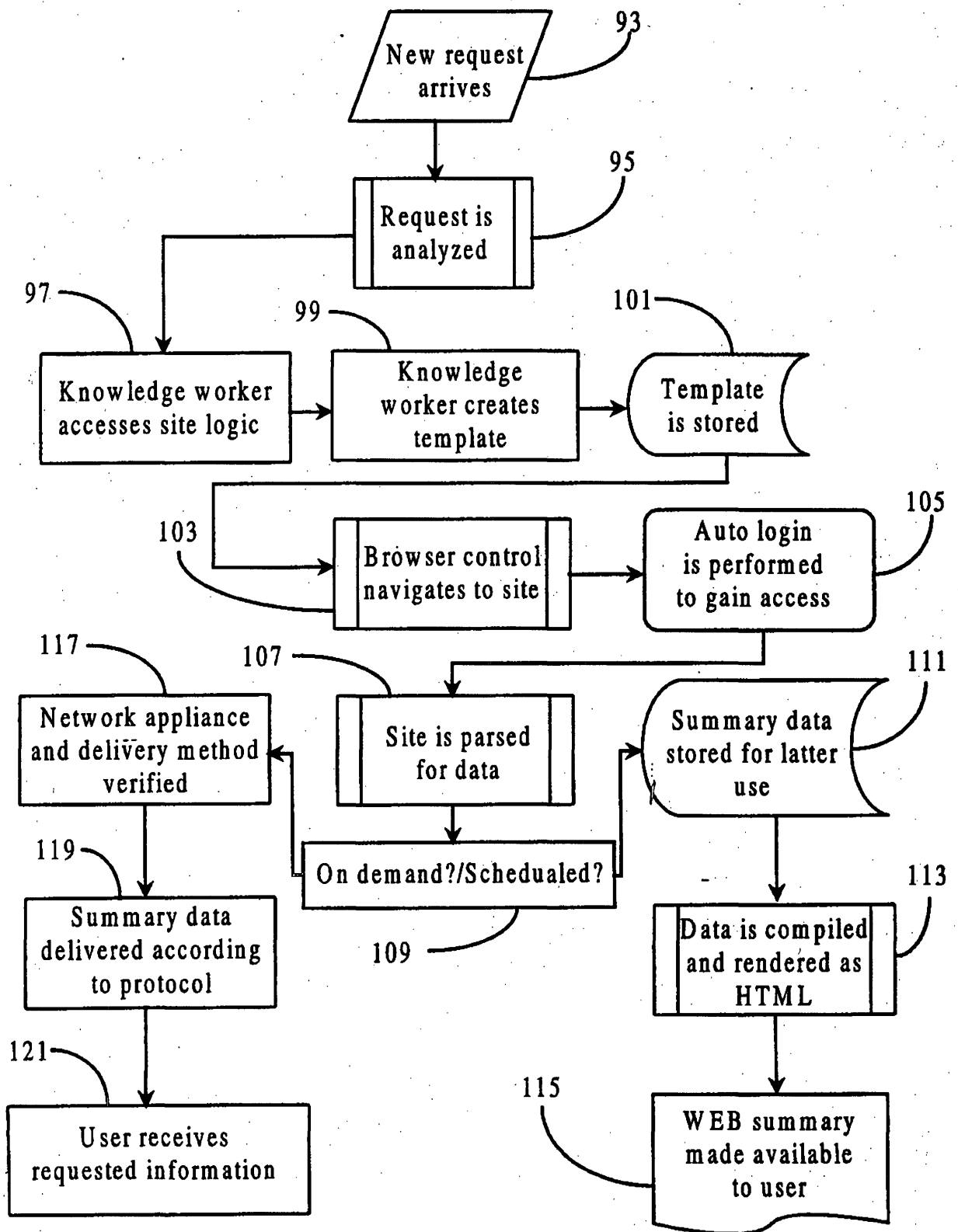


Fig. 5

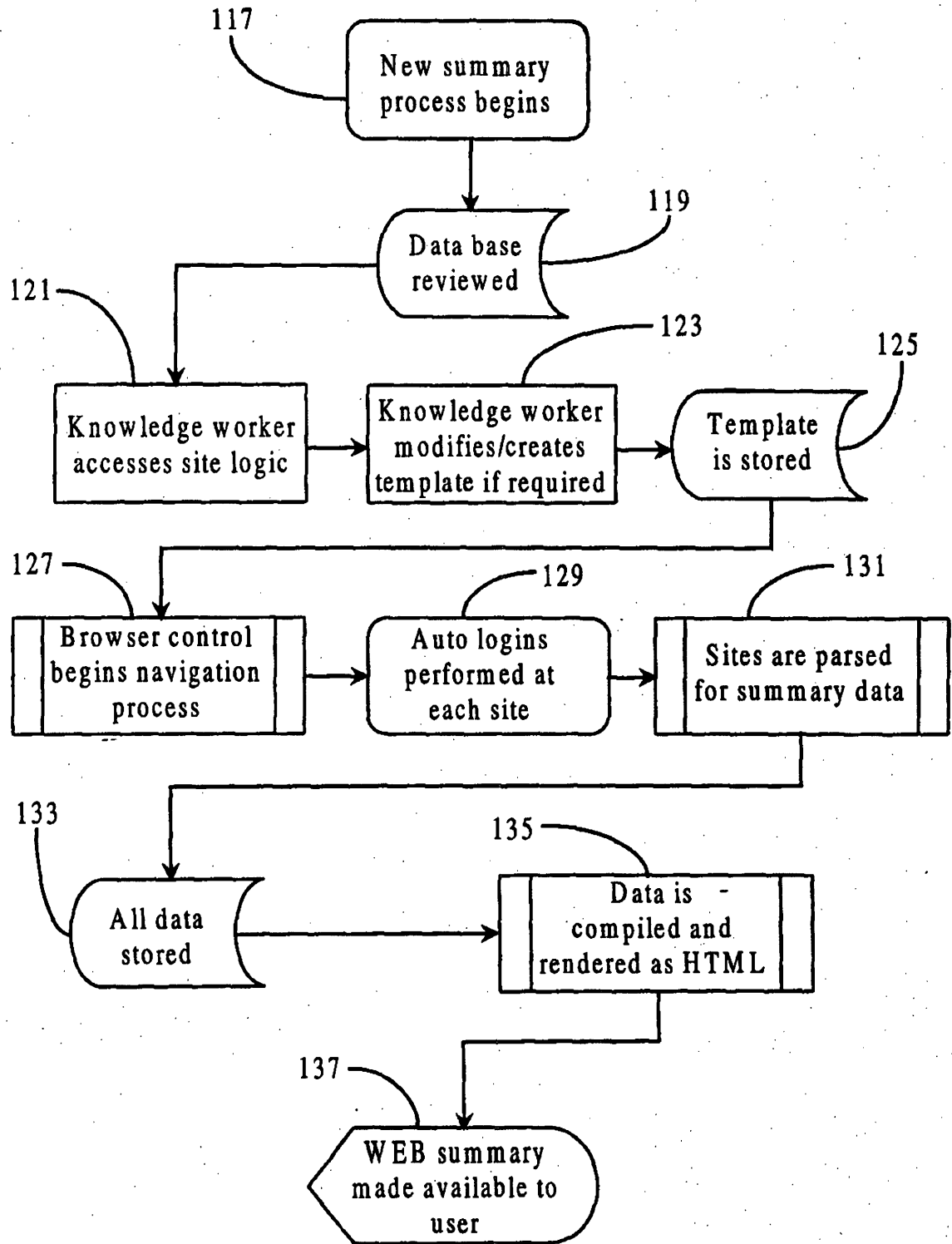


Fig. 6

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**

ATTORNEY DOCKET NO. P3902

As a below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

the specification of which (check one)  is attached hereto.  
 was filed on: \_\_\_\_\_  
 Application Serial No. \_\_\_\_\_  
 and was amended on \_\_\_\_\_  
(If applicable)

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, s 1.56 (a). In the case that the present application is a continuation-in-part application, I further acknowledge the duty to disclose material information as defined in 37 CFR s 1.56(a) which became available between the filing date of the prior application and the filing date of the present application. I hereby claim foreign priority benefits under Title 35, United States Code s119 of any foreign applications for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)	_____	_____	_____
	(Number)	(Country)	(Day/Month/Year Filed)
	_____	_____	_____
	(Number)	(Country)	(Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code, s120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, s112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, s156(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.): 09/208,740 (Filing Date): 12/08/1998 (Status): pending  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.  
(List name and registration number)

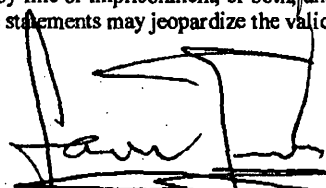
Name: Donald R. Boys Reg. No. 35,074

SEND CORRESPONDENCE TO:  
Donald R. Boys  
P.O. Box 187  
Aromas, CA 95004

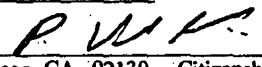
DIRECT TELEPHONE CALLS TO:  
Donald R. Boys (831) 726-1457

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.


Full name of sole or first inventor: Suman Kumar Inala

1st inventor's signature:  Dated: 05/27/1999  
Residence: 3707 Poinciana Dr., Apt. 154, Santa Clara, CA 95051 Citizenship: US  
Post Office Address: Same

Full name of 2nd joint inventor, if any: P Venkat Rangan

2nd inventor's signature:  Dated: 05/27/1999  
Residence: 13011 Callcott Way, San Diego, CA, 92130 Citizenship: US  
Post Office Address: Same

Full name of 3rd joint inventor, if any: Ramakrishna Satyavolu

3rd inventor's signature:  Dated: \_\_\_\_\_  
Residence: 3707 Poinciana Dr., Apt. 154, Santa Clara, CA 95051 Citizenship: India  
Post Office Address: Same

Full name of 4th joint inventor, if any:

4th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 5th joint inventor, if any:

5th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 6th joint inventor, if any:

6th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 7th joint inventor, if any:

7th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 8th joint inventor, if any:

8th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Declaration and Power of Attorney- Page 2

0670990-88822200

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**

Docket Number (Optional)  
**P3902**

Applicant or Patentee: Suman Kumar Inala et al.  
Application or Patent No.: NA  
Filed or Issued: NA  
Title: Method and Apparatus for a Site-Sensitive Interactive Chat Network

I hereby declare that I am

- the owner of the small business concern identified below:
- an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN Yodlee.com

ADDRESS OF SMALL BUSINESS CONCERN 595 Lawrence Expressway, Sunnyvale, CA 94086

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- the specification filed herewith with title as listed above.
- the application identified above.
- the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

- Each person, concern, or organization having any rights in the invention is listed below:
- no such person, concern, or organization exists.
- each such person, concern, or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

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, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING P Venkat Rangan

TITLE OF PERSON IF OTHER THAN OWNER CEO

ADDRESS OF PERSON SIGNING 595 Lawrence Expressway, Sunnyvale, CA 94086

SIGNATURE *P Venkat Rangan* DATE 05/27/1999

Burden Hour Statement: This form is estimated to take 0.3 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



### Certificate of Express Mailing

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TC 2125 MAIL ROOM

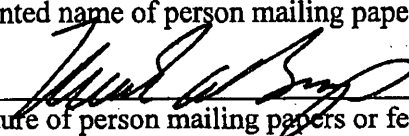
"Express Mail" Mailing Label Number: **EJ745196765US**  
Date of Deposit: **12/14/1999**  
Ref: Case Docket No.: **P3902**  
First Named Inventor: **Inala, Suman Kumar, et al.**  
Serial Number: **09/323,598**  
Filing Date: **06/01/1999**  
Title of Case: **Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.**

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner of Patents and Trademarks, Washington D.C. 20231

1. Petition to correct inventorship under 37 CFR §1.48(a).
2. Verified statement of facts in support of petition.
3. Written Consent in Support of Petition under 37 CFR § 1.48(a)(4).
4. Signed Declaration and Power of Attorney.
5. Check for fees in the amount of 130.00.
6. Certificate of express mailing.
7. Postcard listing contents.

Mark A. Boys

(Typed or printed name of person mailing paper or fee)

  
\_\_\_\_\_  
(Signature of person mailing papers or fee)



# BEST COPY



*Handwritten initials and "#2"*

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Ref: The patent application of: Suman Kumar Inala, et al.  
Case: P3902  
Serial No: 2,323,598  
St: ... to Years.

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01: FUTURE 130.00 DP

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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DEC 22 1999  
TC 2100 MAIL ROOM

In Ref: The patent application of Suman Kumar Inala, et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/99  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**VERIFIED STATEMENT OF FACTS AND DECLARATION IN SUPPORT OF PETITION UNDER 37 CFR § 1.48 (a)(1) TO CORRECT INVENTORSHIP**

DEAR SIR:

1. We, Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan are employees of Oracle Inc., Sunnyvale, CA

2. Donald R. Boys Reg. No. 35,074, is the agent appointed by Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan to prosecute the above referenced Patent application and transact all business in the Patent and Trademark Office connected therewith

3. Donald R. Boys discovered on 08/02/99, through an error in docketing that the above referenced Application naming Suman Kumar Inala, Venkat P. Rangan, and Ramakrishna Satyavolu, as co-inventors was mistakenly filed without adding the name of Sreeranga Prasannakumar Rajan

4. Together as co-workers Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan worked on the project that led to the conception and reduction to practice of the present invention.


5. The name of Sreeranga Prasannakumar Rajan as inventor of the above application was made through error as described above and without


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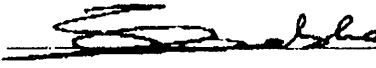
- 2 -

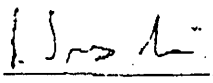
any deceptive intent.

9. All statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statement may jepordize the validity the application or any patent issuing thereon

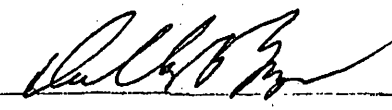
By:  Date: 12 Dec 99, 1999  
~~Suman Kumar Inala~~

 Date: 12/12, 1999  
Venkat P. Rangan

 Date: 12/12, 1999  
Ramakrishna Satyavolu

By:  Date: 12/12, 1999  
Sreeranga Prasannakumar Rajan

Respectfully submitted, Suman Kumar Inala, et al.

By:   
Donald R. Boys, Reg. No. 35,074

Central Coast Patent Agency  
Box 187  
Aromas, CA. 95004  
Phone: (831) 726-1457  
Fax: (831) 726-3475

**BEST COPY**



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Ref: The patent application of: Suman Kumar Inala, et al.  
Case: P3902  
Serial No.: 09-323,598  
Filed: 06.01.99  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

RECEIVED  
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TC 2700 MAIL ROOM

To The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

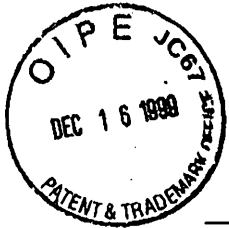
**WRITTEN CONSENT IN SUPPORT OF PETITION  
UNDER 37 CFR §1.48 (a)(4) TO CORRECT INVENTORSHIP**

DEAR SIR:

Pursuant to the requirements of 37 CFR §1.48 (a)(4), Yodlee.com Inc., Sunnyvale, CA, the assignee of the entire interest of the above referenced Patent Application, hereby consents to the Petition to Correct Inventorship to add the name of Sreeanga Prasannakumar Rajan as co-inventor to the above-referenced patent application.

Yodlee.com Inc

P. Venkat Rangan - President



**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**  
ATTORNEY DOCKET NO. P3902

As a below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

the specification of which (check one)  is attached hereto.  
 was filed on: 06/01/1999  
 Application Serial No. 09/323,598  
 and was amended on \_\_\_\_\_  
(If applicable)

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, s 1.56 (a). In the case that the present application is a continuation-in-part application, I further acknowledge the duty to disclose material information as defined in 37 CFR s 1.56(a) which became available between the filing date of the prior application and the filing date of the present application. I hereby claim foreign priority benefits under Title 35, United States Code s119 of any foreign applications for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

(Number)	(Country)	(Day/Month/Year Filed)
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(Number)	(Country)	(Day/Month/Year Filed)
----------	-----------	------------------------

I hereby claim the benefit under Title 35, United States Code, s120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, s112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, s156(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.): 09/208,740 (Filing Date): 12/8/98 (Status): pending  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
(Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.  
(List name and registration number)

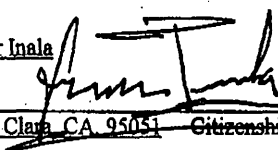
Name: Donald R. Boys Reg. No. 35,074

SEND CORRESPONDENCE TO:  
Donald R. Boys  
P.O. Box 187  
Aromas, CA 95004

DIRECT TELEPHONE CALLS TO:  
Donald R. Boys (831) 726-1457


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.

Full name of sole or first inventor: Suman Kumar Inala

1st inventor's signature:   
Residence: 3707 Poincianna Dr., Apt. 154, Santa Clara, CA, 95051 Citizenship: US  
Post Office Address: Same

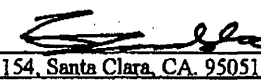
Dated: 12/12/99

Full name of 2nd joint inventor, if any: P. Venkat Rangan

2nd inventor's signature:   
Residence: 13011 Callcott Way, San Diego, CA, 92130 Citizenship: US  
Post Office Address: Same

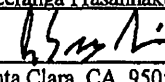
Dated: 12/12/99

Full name of 3rd joint inventor, if any: Ramakrishna Satyavolu

3rd inventor's signature:   
Residence: 3707 Poincianna Dr., Apt. 154, Santa Clara, CA, 95051 Citizenship: India  
Post Office Address: Same

Dated: 12/12/99

Full name of 4th joint inventor, if any: Sreeranga Prasannakumar Rajan

4th inventor's signature:   
Residence: 3475 Granada Ave., #320, Santa Clara, CA, 95051 Citizenship: US  
Post Office Address: Same

Dated: 12/12/99

Full name of 5th joint inventor, if any:

5th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 6th joint inventor, if any:

6th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 7th joint inventor, if any:

7th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 8th joint inventor, if any:

8th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*aw*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/323,598	06/01/99	INALA	S P3902

DONALD R BOYS  
P O BOX 187  
AROMAS CA 95004

LM02/0719

EXAMINER

PERKINS, M

ART UNIT	PAPER NUMBER
----------	--------------

2776

*3*

DATE MAILED: 07/19/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/323,598	INALA ET AL.	
	Examiner	Art Unit	
	Michael J. Perkins	2776	

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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).

**Status**

- 1)  Responsive to communication(s) filed on 01 June 1999.
- 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) 1-12 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) 1-12 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claims \_\_\_\_\_ 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 01 June 1999 is/are objected to by the Examiner.
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a)  All   b)  Some \* c)  None of the CERTIFIED copies of the priority documents have been:
1.  received.
2.  received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
3.  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.

- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- |  |  |
|--|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                     | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____   |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____    | 20) <input type="checkbox"/> Other   |



## DETAILED ACTION

### *Drawings*

1. The draftsman objects to the drawings. See attached form PTO-948 for details.

Correction is required. However, formal correction of the noted defects can be deferred until the examiner allows the application.

### *Specification*

2. While the title is sufficiently (i.e., correction of the title is not required), it could be improved. Examiner suggests considering the following title: "SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION."

3. The disclosure is objected to because of the following informalities:

- The last line of page 21 should read, "gatherer 67."
- Examiner suspects that the "Perl" scripting language referred to on pages 22 (last line) and 30 (line 18) is actually the "Perl" scripting language often used with Internet sites.
- The first "a" in "amazon™.com" on line 11 of page 23 should be capitalized.

Appropriate correction is required.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

7. Claim\*\*\* rejected under 35 U.S.C. 103(a) as being unpatentable over *Nazem* (U.S. Patent 5,983,227, "Dynamic Page Generator," filed 12 June 1997 and issued 9 November 1999 to Nazem et al. U.S. Classification 707/10) in view of *Nehab* (U.S. Patent 6,029,182, "System for Generating a Custom Formatted Hypertext Document by Using a Personal Profile to Retrieve Hierarchical Documents," filed 4 October 1996 and issued 22 February 2000 to Nehab et al. U.S. Classification 707/523.).

As per independent claim 1, *Nazem* teaches:

- "an Internet-connected server; and a portal software executing on the server, including a summary software agent." See, e.g., Figure 1, which notes the invention as part of

“my.yahoo.com” (a section of YAHOO™, a well-known Internet portal), and Figure 5, which also teaches *Nazem*'s invention running on YAHOO™'s site.

Examiner notes that *Nazem* does not explicitly teach maintaining a list of destinations that a summary agent accesses to retrieve data according to pre-programmed criteria and then summarize that data. However, *Nehab* teaches:

- “wherein the Portal maintains a list of Internet destinations specific for a subscriber...” See the “stored Web site address information at, e.g., lines 4-5 of the abstract.
- “and the summary agent accesses the Internet destinations, retrieves information according to pre-programmed criteria, and summarizes the retrieved information for delivery to the subscriber.” See the “Web reader” that accesses the stored Web sites, downloading data using “Web site commands,” formatting the retrieved information into a “personalized document,” as described, e.g., in the abstract.

*Nehab* and *Nazem* both disclose inventions for providing a document of customized Internet content, but only *Nazem* clearly discloses its invention on a server. Placing *Nehab*'s system onto a server at a Portal (as taught in *Nazem*) to extend the disclosed capabilities of *Nazem*'s system would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

As per dependent claim 2, while *Nazem* teaches storing user preferences that are used in determining what goes on a custom page, it does not explicitly disclose an interface for setting up and launching a search. However, *Nehab* teaches:

- “a configuration interface for a subscriber to set up and start a summary search.” See the “personal-news-profile editor 16,” especially the paragraphs beginning at line 36 of column 9 and at line 37 of column 10.

As noted with respect to claim 1, *Nehab* and *Nazem* both disclose inventions for providing a document of customized Internet content, but only *Nazem* clearly discloses its invention on a server. Placing *Nehab*'s system onto a server at a Portal (as taught in *Nazem*) to extend the disclosed capabilities of *Nazem*'s system would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

As per dependent claim 3, while *Nazem* teaches storing user preferences that are used in determining what goes on a custom page, it does not explicitly disclose an interface for setting up and launching a search. However, *Nehab* teaches:

- “the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server.” See the “personal-news-profile 19,” notably the paragraph beginning at line 28 of column 7.

As noted with respect to claim 1, *Nehab* and *Nazem* both disclose inventions for providing a document of customized Internet content, but only *Nazem* clearly discloses its invention on a server. Placing *Nehab*'s system onto a server at a Portal (as taught in *Nazem*) to extend the disclosed capabilities of *Nazem*'s system would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

As per dependent claims 4-5, *Nazem* does not explicitly teach scheduling content delivery, only composing a web page from retrieved content reflecting user preferences. However, *Nehab* teaches:

- “information retrieved in a summary search is stored to be retrieved by the subscriber” (claim 4) and
- “information retrieved in a summary search is downloaded immediately to the subscriber” (claim 5).

See Figure 5B, especially items S520 and S521, and the paragraph beginning at line 22 of column 10 (“In step S520...”) These teach that a user can “execute” *Nehab*’s system “at any time” or can schedule later delivery, i.e., cause the search results to be stored.

As noted with respect to claim 1, *Nehab* and *Nazem* both disclose inventions for providing a document of customized Internet content, but only *Nazem* clearly discloses its invention on a server. Placing *Nehab*’s system onto a server at a Portal (as taught in *Nazem*) to extend the disclosed capabilities of *Nazem*’s system would have been obvious to one of ordinary skill in the art at the time of applicant’s invention.

As per dependent claim 6, while *Nazem* teaches retrieving data from various sources (e.g., Internet servers/sites), it fails to teach logging a user into those sites. However, *Nehab* teaches:

- “autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal.” See *Nehab*’s discussion of “rules” while teaching about Figures 5A and 5B in columns 8 and 9. Note especially the first full paragraph of column 9, which teaches that these rules contain a user’s password information needed for a site.

As noted with respect to claim 1, *Nehab* and *Nazem* both disclose inventions for providing a document of customized Internet content, but only *Nazem* clearly discloses its invention on a server. Placing *Nehab*'s system onto a server at a Portal (as taught in *Nazem*) to extend the disclosed capabilities of *Nazem*'s system would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

As per "method" claims 7-12, they claim the method employed by the "Internet Portal" of rejected claims 1-6, respectively. Refer to the rationales relied upon to reject claims 1-6.

#### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
- a. U.S. Patent 6,032,162 to Burke, U.S. Classification 707/501, teaches storing bookmarks on a remote Internet site.
  - b. U.S. Patent 6,029,180 to Murata et al., U.S. Classification 707/501, teaches parsing Web pages to obtain summary information and presenting said summary information to a user.
  - c. U.S. Patent 5,987,466 to Greer et al., U.S. Classification 707/10, teaches requesting different portions of Web pages based on user-defined priority levels.
  - d. U.S. Patent 5,931,907 to Davies et al., U.S. Classification 709/218, teaches agents that retrieve data from Internet sites using user-specified keywords.
  - e. U.S. Patent 5,855,015 to Shoham, U.S. Classification 707/5, teaches a heuristic device that refines Internet search criteria for a given user's patterns.

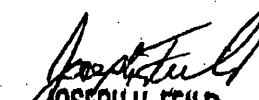
Art Unit: 2776

- f. U.S. Patent 5,794,233 to Rubinstein, U.S. Classification 707/4, teaches a system that helps users browse documents according to interactively set keyword phrases.
  - g. U.S. Patent 5,708,825 to Sotomayor, U.S. Classification 707/501, teaches generating different types of summary pages from documents.
  - h. U.S. Patent 5,649,186 to Ferguson, U.S. Classification 707/10, teaches parsing and indexing data from HTML documents, then using the data in a page customized for a user.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Perkins whose telephone number is (703) 305-5735. The examiner can normally be reached on Monday-Friday, 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-9051 for regular communications and (703) 308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Michael J. Perkins  
Patent Examiner  
Art Unit 2776  
July 14, 2000

  
JOSEPH H. FEILD  
PRIMARY EXAMINER

<b>Notice of References Cited</b>				Application/Cont 09/323,598	6.	Applicant(s)/Patent Under Reexamination INALA ET AL.			
				Examiner Michael J. Perkins	Art Unit 2776	Page 1 of 1			
<b>U.S. PATENT DOCUMENTS</b>									
*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	DOCUMENT SOURCE **		
							APS	OTHER	
<input type="checkbox"/>	A	6,032,162	Feb. 2000	Burke	707	501	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	B	6,029,182	Feb. 2000	Nehab et al.	707	523	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	C	6,029,180	Feb. 2000	Murata et al.	707	501	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	D	5,987,466	Nov. 1999	Greer et al.	707	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	E	5,983,227	Nov. 1999	Nazem et al.	707	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	F	5,931,907	Aug. 1999	Davies et al.	709	218	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	G	5,855,015	Dec. 1998	Shoham	707	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	H	5,764,233	Aug. 1998	Rubinstein	707	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	I	5,708,825	Jan. 1998	Sotomayor	707	501	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	J	5,649,186	Jul. 1997	Ferguson	707	10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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\*A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707 05(a).)

\*\*APS encompasses any electronic search i.e. text, image, and Commercial Databases.

U.S. Patent and Trademark Office  
PTO-892 (Rev. 03-98)

Notice of References Cited

Part of Paper No 3



**NOTICE OF DRAFTERPERSON'S PATENT DRAWING REVIEW**

The drawing filed (insert date) 6/1/99 are:

- A.  not objected to by the Draftperson under 37 CFR 1.84 or 1.152.
- B.  objected to by the Draftperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings, where necessary. Corrected drawings must be submitted according to the instructions on the back of this notice.

<p><b>1. DRAWINGS. 37 CFR 1.84(a):</b> Acceptable categories of drawings:                  Black ink. Color.  <input type="checkbox"/> Color drawing are not acceptable until petition is granted.                  Fig.(s) _____  <input type="checkbox"/> Pencil and non black ink is not permitted. Fig(s) _____</p> <p><b>2. PHOTOGRAPHS. 37 CFR 1.84(b)</b>  <input type="checkbox"/> Photographs are not acceptable until petition is granted,  <input type="checkbox"/> 3 full-tone sets are required. Fig(s) _____  <input type="checkbox"/> Photographs not properly mounted (must bristol board or photographic double-weight paper). Fig(s) _____  <input type="checkbox"/> Poor quality (half-tone). Fig(s) _____</p> <p><b>3. TYPE OF PAPER. 37 CFR 1.84(e)</b>  <input type="checkbox"/> Paper not flexible, strong, white and durable.                  Fig.(s) _____  <input type="checkbox"/> Erasures, alterations, overwritings, interlineations, folds, copy machine marks not acceptable. (too thin)  <input type="checkbox"/> Mylar, vellum paper is not acceptable (too thin).                  Fig(s) _____</p> <p><b>4. SIZE OF PAPER. 37 CFR 1.84(F):</b> Acceptable sizes:  <input checked="" type="checkbox"/> 21.0 cm by 29.7 cm (DIN size A4)  <input type="checkbox"/> 21.6 cm by 27.9 cm (8 1/2 x 11 inches)  <input type="checkbox"/> All drawings sheets not the same size.                  Sheet(s) _____</p> <p><b>5. MARGINS. 37 CFR 1.84(g):</b> Acceptable margins:                  Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm                  SIZE: A4 Size                  Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm                  SIZE: 8 1/2 x 11  <input checked="" type="checkbox"/> Margins not acceptable. Fig(s) _____  <input checked="" type="checkbox"/> Top (T) <input checked="" type="checkbox"/> Left (L)  <input checked="" type="checkbox"/> Right (R) <input type="checkbox"/> Bottom (B)</p> <p><b>6. VIEWS. CFR 1.84(h)</b>                  REMINDER: Specification may require revision to correspond to drawing changes.  <input type="checkbox"/> Views connected by projection lines or lead lines.                  Fig.(s) _____                  Partial views. 37 CFR 1.84(h)(2)  <input type="checkbox"/> Brackets needed to show figure as one entity.                  Fig.(s) _____  <input type="checkbox"/> Views not labeled separately or properly.                  Fig.(s) _____  <input type="checkbox"/> Enlarged view not labeled separately or properly.                  Fig.(s) _____</p>	<p><b>7. SECTIONAL VIEWS. 37 CFR 1.84(h)(3)</b>  <input type="checkbox"/> Hatching not indicated for sectional portions of an object.                  Fig.(s) _____  <input type="checkbox"/> Sectional designation should be noted with Arabic or Roman numbers. Fig.(s) _____</p> <p><b>8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)</b>  <input type="checkbox"/> Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned, so that the top becomes the right side, except for graphs. Fig.(s) _____  <input type="checkbox"/> Views not on the same plane on drawing sheet. Fig.(s) _____</p> <p><b>9. SCALE. 37 CFR 1.84(k)</b>  <input type="checkbox"/> Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction.                  Fig.(s) _____</p> <p><b>10. CHARACTER OF LINES, NUMBERS, &amp; LETTERS. 37 CFR 1.84(l)</b>  <input type="checkbox"/> Lines, numbers &amp; letters not uniformly thick and well defined, clean, durable and black (poor line quality).                  Fig.(s) _____</p> <p><b>11. SHADING. 37 CFR 1.84(m)</b>  <input type="checkbox"/> Solid black areas pale. Fig.(s) _____  <input type="checkbox"/> Solid black shading not permitted. Fig.(s) _____  <input type="checkbox"/> Shade lines, pale, rough and blurred. Fig.(s) _____</p> <p><b>12. NUMBERS, LETTERS, &amp; REFERENCE CHARACTERS. 37 CFR 1.48(p)</b>  <input type="checkbox"/> Numbers and reference characters not plain and legible.                  Fig.(s) _____  <input type="checkbox"/> Figure legends are poor. Fig.(s) _____  <input type="checkbox"/> Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(3) Fig.(s) _____  <input type="checkbox"/> English alphabet not used. 37 CFR 1.84(p)(3) Fig.(s) _____  <input type="checkbox"/> Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig.(s) _____</p> <p><b>13. LEAD LINES. 37 CFR 1.84(q)</b>  <input type="checkbox"/> Lead lines cross each other. Fig.(s) _____  <input type="checkbox"/> Lead lines missing. Fig.(s) _____</p> <p><b>14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.48(t)</b>  <input type="checkbox"/> Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Fig.(s) _____</p> <p><b>15. NUMBERING OF VIEWS. 37 CFR 1.84(u)</b>  <input type="checkbox"/> Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig.(s) _____</p> <p><b>16. CORRECTIONS. 37 CFR 1.84(w)</b>  <input type="checkbox"/> Corrections not made from PTO-948 dated _____</p> <p><b>17. DESIGN DRAWINGS. 37 CFR 1.152</b>  <input type="checkbox"/> Surface shading shown not appropriate. Fig.(s) _____  <input type="checkbox"/> Solid black shading not used for color contrast.                  Fig.(s) _____</p>
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COMMENTS

REVIEWER [Signature] DATE 8/1/99 TELEPHONE NO. 703 3050890  
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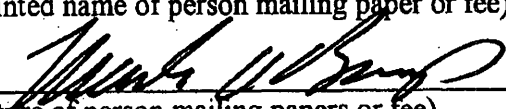
"Express Mail" Mailing Label Number: EL573442515US  
Date of Deposit: 07/20/2000  
Ref: Case Docket No.: P3902  
First Named Inventor: Sam Inala et al.  
Serial Number: 09/323,598  
Filing Date: 06/01/1999  
Title of Case: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner of Patents and Trademarks, Washington D.C. 20231

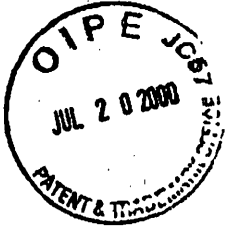
1. Petition to Make Special.
2. Exhibit 1 (4 sheets)
3. Check for fees in the amount of 130.00
4. Certificate of express mailing.
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Mark A. Boys

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In Re: Sam Inala et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: June 1, 1999  
Subject: Method and Apparatus for Obtaining and Presenting  
WEB Summaries to Users

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir,

**PETITION TO MAKE SPECIAL**

Pursuant to 35 U.S.C. 708.02, applicant in the above-referenced patent application hereby petitions that the application be accorded special status and be advanced for examination.

The basis for the present petition is 708.02 II, INFRINGEMENT.

(A) There is an infringing device or method on the market and in use. The infringing system is a Web-based aggregation service provided by VerticalOne.com Inc., of Atlanta, GA. In particular the services described on the Web at

<http://www.verticalone.com/services.html>, a copy of which is provided herewith as

Exhibit 1.

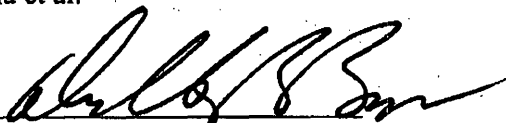
(B) I, the undersigned, am a registered Patent Agent with the USPTO, reg. no. 35,074, and I am the agent of record in the above-referenced case. I have made a rigid comparison of the services offered by VerticalOne, and have determined, in my opinion, that the services infringe one or more of the claims sought to be patented in the present case.

(C) We have made a search of the prior art and have found none that directly bears on the claims of the above-described case.

Respectfully Submitted,

Sam Inala et al.

by

  
Donald R. Boys  
Reg. No. 35,074

Donald R. Boys  
P.O. Box 187  
Aromas, CA 95004  
(831) 726-1457

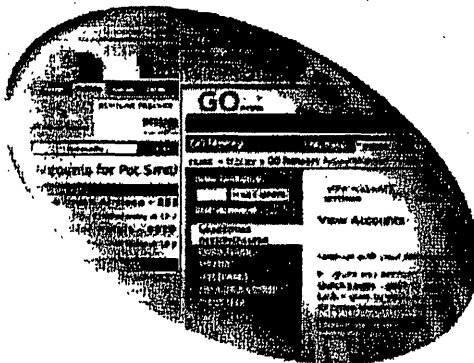
EXHIBIT #1

ABOUT US  
SERVICES

### SERVICES

Service Technology  
Business Model  
Service Demonstration  
Future Technology & Vision

#### VerticalOne Web Service



The VerticalOne<sup>SM</sup> Web service makes your Internet strategy more effective by helping your customers get online and then keeping them online. No more hassle of dealing with traditional ways of accessing the information that matters to them the most. VerticalOne makes it easier than ever for users to access their online personal account information from the convenience of their favorite site.

#### PARTNERS

The VerticalOne  
ADVANTAGE

#### ENDORSEMENTS

NEWSROOM

SITE MAP

SIGN UP

VerticalOne's Web service acts as an agent to consolidate, organize and present consumers' personal account information for confidential viewing and access. Consumers will only have to remember one login and password to access all of their personal account information-- fundamentally changing the way they use the Internet. Personal content and transactions have always taken place with consumers face to face or through the mail, telephone or fax. VerticalOne's Web service is a virtual repository for the documents a consumer receives in the mailbox, while also acting as a venue to engage them in eCommerce.

#### Features

All Their Online Accounts. One Easy Login. VerticalOne offers the following features:

- Customization to give the look and feel of residing at your site by incorporating background colors, font colors and more
- Snapshot of all your customers' personal accounts in one place
- Banking
- Investments
- Credit Cards
- Communications
- Reward programs
- Bills
- Access to over 400 online personal accounts (click [here](#) to see our current list of providers)
- Online demo and easy-to-use registration process
- Account Summary screen of all online accounts: number of points earned, number of messages received, investment net equity, balances due and balances remaining



## **VerticalOne Wireless Service**

**Remote Access to Personal Account Information - Anytime, Anywhere**

Delivery to Mobile Phones, Palm VII™ and other devices extends the reach of the VerticalOneSM Web service to more than 32 million high-income, high-asset users. VerticalOne's Wireless service takes the single page summary concept to the next level by offering the added convenience of scheduled and on-demand delivery options for account balances and more.

### **The Wireless Service**

- ***Increases online service usage with sign-up, account set-up and management still hosted through Web service***
- ***Available through any Short-Message-Service (SMS) -capable and WAP enabled digital handset, Palm VII™ device, text messaging pager, or paging enhanced PDA***
- ***Scheduled or "On-Demand" Information Delivery Options***
- ***Reliable delivery of custom formatted data per cell model***
- ***Usability Engineered Interface for quick and easy account configuration***

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VerticalOne Services

<http://www.verticalone.com/services.html>



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**CHANGE OF ADDRESS/POWER OF ATTORNEY**

FILE LOCATION 27U6 SERIAL NUMBER 09323598 PATENT NUMBER

THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 24739

THE PRACTITIONERS OF RECORD HAVE BEEN CHANGED TO CUSTOMER # 24739

THE FEE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 24739

ON 08/09/00 THE ADDRESS OF RECORD FOR CUSTOMER NUMBER 24739 IS:

CENTRAL COAST PATENT AGENCY  
PO BOX 187  
AROMAS CA 95004

AND THE PRACTITIONERS OF RECORD FOR CUSTOMER NUMBER 24739 ARE:

35074

PTO INSTRUCTIONS: PLEASE TAKE THE FOLLOWING ACTION WHEN THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER NUMBER: RECORD, ON THE NEXT AVAILABLE CONTENTS LINE OF THE FILE JACKET, 'ADDRESS CHANGE TO CUSTOMER NUMBER'. LINE THROUGH THE OLD ADDRESS ON THE FILE JACKET LABEL AND ENTER ONLY THE 'CUSTOMER NUMBER' AS THE NEW ADDRESS. FILE THIS LETTER IN THE FILE JACKET. WHEN ABOVE CHANGES ARE ONLY TO FEE ADDRESS AND/OR PRACTITIONERS OF RECORD, FILE LETTER IN THE FILE JACKET. THIS FILE IS ASSIGNED TO GAU 2776.

PTO/SB/97 (12-97)

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

In Re. Application of: Suman Kumar Inala et al.  
 Case: P3902  
 Serial No.: 09/323,598 Art Unit: 2776 Examiner: J. Field  
 Filed: 06/01/1999  
 Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

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 Attention: J. Feild  
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A

"Express Mail" Mailing Label Number **EL573443895US** CASE DOCKET NO. **23902**  
 In reference to application of **Suman Kumar Inala et al.**  
 Serial No **09/323,598**  
**For Method and Apparatus for Obtaining and Presenting WEB Summaries to Users**


Sir:  
 Transmitted herewith is and an amendment in the above-identified application, under 37 C.F.R. 1.312.

No additional fee is required.  
 Small entry status of this previously submitted application under 37 CFR 1.9 and 1.27 has been established by a verified statement previously submitted.  
 A verified statement to establish small entry status under 37 CFR 1.9 and 1.27 is enclosed.  
 The fee has been calculated as shown below.

**** CLAIMS AS AMENDED****							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Claims Remaining After Amendment		Highest No. Paid For Previously	Present Extra	Rate Small Entry	Rate Large Entry	Additional Fee
Total Claims	12	Minus	**20	0	\$09.00	\$18.00	\$0.00
Indep. Claims	2	Minus	***3	0	\$39.00	\$78.00	\$0.00
<input type="checkbox"/> First presentation of a multiple dependent claim					\$135	\$270	\$0.00
Extension Fee	<input type="checkbox"/> 1st Month		<input type="checkbox"/> 2nd Month		<input type="checkbox"/> 3rd Month		\$0.00
Total additional for claims and time extensions							\$0.00

\*\* If the "Highest Number Previously Paid For" in this space is less than 20, write "20" in this space.  
 \*\*\* If the "Highest Number Previously Paid For" in this space is less than 3, write "3" in this space.  
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 \* If the entry in column 2 is less than the entry in column 4, write "0" in column 5.

A check in the amount of \_\_\_\_\_ is attached.  
 Charge \$ \_\_\_\_\_ to deposit account \_\_\_\_\_ (A duplicate of this sheet is enclosed).  
 Please charge any additional fees or credit overpayment to Deposit Account 50-0214. A duplicate of this sheet is enclosed.

Respectfully Submitted,   
 Donald R. Boys  
 Reg. No. 33,074

Central Coast Patent Agency  
 P.O. Box 187  
 Arroyo, CA 95004  
 (831) 726-1457

"Express Mail" Mailing Label Number **EL573443895US** CASE DOCKET NO. **23902**  
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 Donald R. Boys  
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 Arroyo, CA 95004  
 (831) 726-1457

# SC  
5 A  
9-7-00

**IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE**  
Art Unit 2776  
Examiner Joseph Feild

In Re: Suman Kumar Inala et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/99  
Subject: **Method and Apparatus for Obtaining and  
Presenting WEB Summaries to Users**

To the Commissioner of Patent and Trademarks  
Washington, D.C. 20231



Dear Sir:

**AMENDMENT A**

**In the specification:**

Please cancel the present title, and substitute therefore -- **Server-Side Web  
Summary Generation and Presentation** --

On page 21, line 29, delete the word "gather", and substitute -- gatherer --  
therefor

On page 22, line 29, delete the word "Pearl", and substitute -- PERL --  
therefor.

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On page 23, line 11, delete the word "amazon", and substitute -- Amazon --  
- therefor.

On page 30, line 18, delete the word "Pearl", and substitute -- PERL --  
therefor.

In the claims:

All of the claims presented and standing for examination are reproduced  
below. Those claims amended are labeled (Amended). Those claims not  
amended herein are labeled (Unchanged). Those claims added are labeled  
(Added).

1. An Internet Portal, comprising:

an Internet-connected server; [and]

a list of addresses of Internet sites associated with a specific person,  
which sites store information specific to the person; and

a [portal] software suite executing on the server, the software suite  
including a set of [summary software agent] gathering software agents,  
with at least one gatherer agent <sup>dedicated</sup> specific to each of the Internet sites;

wherein the Portal [maintains a list of Internet destinations specific  
for a subscriber, and the summary software agent accesses the Internet  
destinations, retrieves information according to pre-programmed criteria,  
and summarizes the retrieved information for delivery to the subscriber]  
accomplishes a gathering cycle by accessing individual ones of the Internet  
sites, authenticating to each site accessed as the person, and the gathering  
agent <sup>dedicated</sup> specific to each site accessed extracts data from that site.

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2. (Amended) The Portal of claim 1 further comprising a configuration and initiation interface for [a subscriber] the person to set up and start a [summary search] gathering cycle.

3. (Amended) The Portal of claim 1 wherein the [summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server] data gathered by the gathering agents is summarized and/or aggregated at the portal to be provided to the person.

4. (Amended) The Portal of claim 1 wherein [information retrieved in a summary search is stored to be retrieved by the subscriber] the data gathered by the gathering agents is data specific to the person.

5. (Amended) The Portal of claim 1 wherein [information retrieved in a summary search is downloaded immediately to the subscriber] the portal stores user names and passwords for the person for each Internet site visited, and uses the stored user names and passwords to authenticate to each site as the person.

6. (Amended) The Portal of claim 1 wherein [autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal] the gathering agents comprise a parsing process in searching the accessed sites for data.

7. (Amended) In an Internet Portal system, a method for [providing summaries of information at WEB sites, URLs for which are maintained for individual subscribers] gathering data specific to a person from a plurality of Internet sites storing data specific to that person, the method comprising the steps of:

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b (a) [configuring a summary software agent executable on the Portal to access the URLs] <sup>initiating a gathering cycle</sup> accessing individual ones of the plurality of sites.

(b) [retrieving information from individual ones of the WEB sites accessed according to pre-programmed criteria specific to each subscriber] authenticating to the <sup>sites</sup> site as the person; and

b (c) [providing the information to the subscriber] executing a software gathering agent at each site accessed to gather data from the site. the gathering agent <sup>dedicated to each</sup> specifies the site accessed.

Al 8. (Amended) The method of claim 7 wherein the Portal further comprises a configuration and initiation interface, and further comprising a step for the [subscriber] person to configure and initiate[, via a configuration and initiation interface, a summary search] a gathering cycle through the interface.

9. (Amended) The method of claim 7 [wherein the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server] further comprising a step for summarizing at the Portal the data gathered by the gathering agents, the resulting summary to be provided to the person.

10. (Amended) The method of claim 7 wherein [information retrieved in a summary search is stored to be retrieved by the subscriber] the data gathered by the gathering agents is specific to the person.

11. (Amended) The method of claim 7 wherein [information retrieved in a summary search is downloaded immediately to the subscriber] in step (a) the portal stores user names and passwords for the person for each Internet

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site visited, and uses the stored user names and passwords to authenticate to each site as the person

12. (Amended) The method of claim 7 wherein [autologins are performed for the subscriber at each Internet site according to a data stored for the subscriber at the Portal] in step (c) the gathering agents comprise a parsing process in searching the accessed sites for data.

#### REMARKS

The present amendment is responsive to the Office Action mailed in the above-referenced case on July 19, 2000. In the Office Action the Examiner has suggested a new title for the invention, and has objected to the disclosure for certain formalities. Further, all of the claims stand rejected under 35 U.S.C. 103(a) over Nazem, US 5,983,227, herein after Nazem, in view of Nehab, US 6,029,182, hereinafter Nehab.

In response, applicant has carefully studied the Examiner's remarks and the references, and has judiciously amended and narrowed all of the claims to more distinctly claim and particularly point out the subject matter considered to be patentable, and to distinguish clearly over the art cited and applied. Every claim, including the depended claims, has been amended, and the claims in their amended form are presented below in italics as an aid in prosecution:

- 1. An Internet Portal, comprising:  
an Internet-connected server;*

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*a list of addresses of Internet sites associated with a specific person, which sites store information specific to the person; and  
a software suite executing on the server, the software suite including a set of gathering software agents, with at least one gatherer agent specific to each of the Internet sites;*

*wherein the Portal accomplishes a gathering cycle by accessing individual ones of the Internet sites, authenticating to each site accessed as the person, and the gathering agent specific to each site accessed extracts data from that site.*

*2. The Portal of claim 1 further comprising a configuration and initiation interface for the person to set up and start a gathering cycle.*

*3. The Portal of claim 1 wherein the data gathered by the gathering agents is summarized and/or aggregated at the portal to be provided to the person.*

*4. The Portal of claim 1 wherein the data gathered by the gathering agents is data specific to the person.*

*5. The Portal of claim 1 wherein the portal stores user names and passwords for the person for each Internet site visited, and uses the stored user names and passwords to authenticate to each site as the person.*

*6. The Portal of claim 1 the gathering agents comprise a parsing process in searching the accessed sites for data.*

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7. *In an Internet Portal system, a method for gathering data specific to a person from a plurality of Internet sites storing data specific to that person, the method comprising the steps of:*

*(a) accessing individual ones of the plurality of sites;*

*(b) authenticating to the site as the person; and*

*(c) executing a software gathering agent at each site accessed to gather data from the site, the gathering agent specific the site accessed.*

8. *The method of claim 7 wherein the Portal further comprises a configuration and initiation interface, and further comprising a step for the person to configure and initiate a gathering cycle through the interface.*

9. *The method of claim 7 further comprising a step for summarizing at the Portal the data gathered by the gathering agents, the resulting summary to be provided to the person.*

10. *The method of claim 7 wherein the data gathered by the gathering agents is specific to the person.*

11. *The method of claim 7 wherein in step (a) the portal stores user names and passwords for the person for each Internet site visited, and uses the stored user names and passwords to authenticate to each site as the person.*

12. *The method of claim 7 wherein in step (c) the gathering agents comprise a parsing process in searching the accessed sites for data.*

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Regarding independent claim 1, the Applicant has amended the claim to add limitations (a) that the sites accessed are sites that store information specific to a person; (b) that the sites accessed are associated with the specific person by virtue of being sites on a list at the Portal, the list associated with the person; (c) the software suite comprising a set of gathering agents with at least one gatherer specific to each cite accessed; and (d) that the Portal authenticates to individual sites as the person.

In studying both Nazem and Nehab it is clear that these systems search primarily news and magazine cites for articles of interest to a person, and aggregate retrieved information into a document for the user. Neither of the references teach any one of the four limitations listed above. Nehab does teach commands and rules in retrieving information from a site, but the commands are clearly equivalent to automated hyperlinking (see Nehab col 8, lines 36 and 37 "...where it accepts a Web command (i.e., a command to traverse a hypermedia link.)")

As claim 1 is clearly patentable over the art, claims 2-6 are patentable as amended at least as depended from a patentable claim, and further on their merits. For example, claim 2 as amended recites an initiation interface not taught in the art, claim 3 recites summarization or aggregation, and summarization is not taught in the art. The art teaches aggregation, which is putting together the retrieved information. Summarization includes at least combining some data such that the summary is not just an aggregated restatement of the gathered material. Claim 4 recites gathering data specific to the person for which the gathering is done (such as personal financial data like bank balances and stock values), which is not taught in the art. Claim 5 recites using

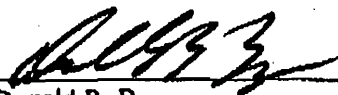
passwords provided by the person to authenticate to the sites accessed, not taught in the art. And claim 6 teaches use of parsing.

Method claim 7 recites steps in practicing the invention which incorporate all of the added limitations listed above for amended claim 1, and is patentable by the same arguments put forth above on behalf of claim 1. Similarly, claims 8-12 are now patentable as amended at least as depended from a patentable claim, and specifically on their merits as well, based on the same arguments advanced for claims 2-6.

As all of the claims left standing and as amended are clearly shown to be patentable over the art cited and applied, applicant respectfully requests reconsideration and that the case be passed quickly to issue.

If any fees are due beyond fees paid with this amendment, authorization is made to deduct those fees from deposit account 50-0534. If any time extension is needed beyond any extension requested with this amendment, such extension is hereby requested.

Respectfully Submitted,  
Suman Kumar Inala et al.

by   
Donald R. Boys  
Reg. No. 35,074

Donald R. Boys  
Central Coast Patent Agency  
P.O. Box 187  
Aromas, CA 95004  
(831) 726-1457

9

A

"Express Mail" Mailing Label Number: EL573443895US

CASE DOCKET NO. P3902

In reference to application of Suman Kumar Inala et al.

Serial No. 09/323,598

For Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

Sir:

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- Please charge any additional fees or credit overpayment to Deposit Account 50-0534 A duplicate of this sheet is enclosed.



Respectfully Submitted,

*Donald R. Boys*  
 Donald R. Boys  
 Reg. No. 35,074

Central Coast Patent Agency  
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10

"Express Mail" Mailing Label Number: EL573443895US

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In reference to application of Suman Kumar Inala et al.

Serial No. 09/323,598

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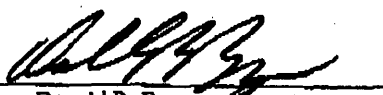
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 Reg. No. 35,074

Central Coast Patent Agency  
 P.O. Box 187  
 Arroyo, CA 95004  
 (831) 726-1457

COPY

TS

<b>Notice of Allowability</b>	Application No. <b>09/323,598</b>	Applicant(s) <b>INALA ET AL</b>
	Examiner <b>Joseph Feld</b>	Group Art Unit <b>2176</b>

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 and Issue Fee Due or other appropriate communication will be mailed in due course.

- This communication is responsive to Amdt A, filed 9/5/00; Interview 11/17/00, Examiner's Amendment
- The allowed claim(s) is/are 1-12
- The drawings filed on \_\_\_\_\_ are acceptable.
- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - All  Some\*  None of the CERTIFIED copies of the priority documents have been
    - received.
    - received in Application No. (Series Code/Serial Number) \_\_\_\_\_
    - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \*Certified copies not received: \_\_\_\_\_
- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- Applicant MUST submit NEW FORMAL DRAWINGS
  - because the originally filed drawings were declared by applicant to be informal.
  - including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 3.
  - including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.
  - including changes required by the attached Examiner's Amendment/Comment.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

- Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

**Attachment(s)**

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

#8B  
11-20W

Application/Control Number: 09/323,598

Page 2

Art Unit: 2176

1. 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 Donald Boys on November 17, 2000.

2. The application has been amended as follows:

Claim 1:

At line 7, replace "specific" with --dedicated--

At line 14, replace "specific" with --dedicated--

Claim 7:

At line 7, before "accessing", insert --initiating a gathering cycle--

At line 10, replace "site" with --individual sites--

At line 13, replace "specific the" with --dedicated to each--



Application/Control Number: 09/323,598

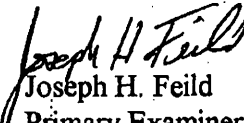
Page 3

Art Unit: 2176

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Feild whose telephone number is (703) 305-9792. The examiner can normally be reached on Monday, Tuesday, and Friday from 8:30 a.m. to 5:00 p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached on (703) 308-5186. However, in such a case, please allow at least one business day. The fax phone number for this Group is (703) 308-9051.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

  
Joseph H. Feild  
Primary Examiner  
Art Unit 2176

20 November 2000

**Notice of References Cited**

Application No.  
09/323,698

Applicant(s)

INALA ET AL

Examiner  
Joseph Felld

Group Art Unit  
2176

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
X	A	6,108,686	8/2000	WILLIAMS, JR.	709	202
X	B	6,119,101	9/2000	PECKOVER	705	10 X
X	C	6,041,326	3/2000	AMRO ET AL	707	10
X	D	6,038,668	8/2000	CHIPMAN ET AL	713	201
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

**FOREIGN PATENT DOCUMENTS**

*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
	N						
	O						
	P						
	Q						
	R						
	S						
	T						

**NON-PATENT DOCUMENTS**

*		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
X	U	Stanley, Tracey, "Intelligent Searching Agents on the Web", 4 pages, < <a href="http://www.ariadne.ac.uk/issu7/search-engines/">http://www.ariadne.ac.uk/issu7/search-engines/</a> >	1/1997
X	V	Jansen, James, "Using an Intelligent Agent to Enhance Search Engine Performance", 16 pages, < <a href="http://www.firstmonday.dk/issues/issue2_3/jansen/">http://www.firstmonday.dk/issues/issue2_3/jansen/</a> >	12/1998
X	W	Lesser, Victor et al, "BIG: A Resource_Bounded Information Gathering Agent", 18 pages, < <a href="http://dis.cs.umass.edu/research/big/">http://dis.cs.umass.edu/research/big/</a> >	1/1998
	X		

\* A copy of this reference is not being furnished with this Office action  
(See Manual of Patent Examining Procedure, Section 707.05(a))

## Regular Columns



### Intelligent Searching Agents on the Web

In the Search Engines column for this issue, Tracey Stanley describes Web-based Intelligent Searching Agents, and takes a closer look at a few examples you may wish to play with.



Same column  
in earlier issue

Same column  
in later issue

#### What are Intelligent Searching Agents?

Many web search engines use the concept of a 'spider' - automated software which goes out onto the web and trawls through the contents of each server it encounters, indexing documents as it finds them. This approach results in the kinds of databases maintained by services such as Alta Vista and Excite - huge indexes to a vast chunk of what's currently available on the web. However, the problems which users can face when using such databases are beginning to be well documented. A recent JISC-funded investigation [1] into the use of web search engines indicates that users can typically encounter a number of difficulties. These include the issue of finding information relevant to their needs, and the problem of information overload - when far too much information is returned from a search.

Typically, a search on Alta Vista can result in thousands of hits, many of which will not be relevant to a user's enquiry. The size and wide coverage of such a database can make it difficult to quickly and effectively track down relevant information, using the limited searching features which are available.

Intelligent searching agents have been developed in order to provide a solution to this problem. Intelligent agents can utilise the spider technology used by traditional web search engines, and employ this in new kinds of ways. Typically, these tools are spiders which can be trained by the user to search the web for specific types of information resources. The agent can be personalised by its owner so that it can build up a picture of individual likes, dislikes and precise information needs. An intelligent agent can also be autonomous - so that it is capable of making judgements about the likely relevance of material.

Once trained, an agent can then be set free to roam the network turning up useful information sources whilst the user gets on with more urgent tasks, or even goes off line. This means that intelligent agents could be left roaming the web overnight, or at weekends, and a user could simply pick up search results at whichever is the most convenient time for them.

Another feature of intelligent agents is that their usefulness as searching tools should increase the more frequently they are used. Over a period of time, an agent will build up an accurate picture of a users information needs. It will learn from past experiences, as a user will have the option of reviewing

search results and rejecting any information sources which aren't relevant or useful. This information will be stored in a user profile which the agent uses when performing a search. So, an agent can also learn from its initial forays into the web, and return with a more tightly defined searching agenda if requested.

## Some examples of Intelligent Agents

### FireFly

Firefly is a music and film recommendation system on the web which uses intelligent agents to build up a complex profile of user preferences using a technique known as automated collaborative filtering.

Lets say, for example, that you are a big fan of The Spice Girls, and you want to find out if there are any other similar groups that might also be to your musical taste. You can tell FireFly which groups you like, and it will start to build up a picture of your tastes. This information goes into a personal profile which is stored in the FireFly database. FireFly will then go away and check its database to see if anyone else has indicated a preference for The Spice Girls - if so, it will take a look at the musical profile of other Spice Girls fans and suggest other artists, based on the premise that people who like The Spice Girls will also like other similar types of music. So, it's the computer equivalent of running into someone in the pub and having a chat about the types of music you like.

Once Firefly starts to recommend artists to you it will also give you the opportunity to rate these artists on a scale from "don't know" to "the best!". As you continue to add your ratings, you continue to expand the musical profile of you which Firefly now holds. You can also click on a hypertext link to find more information about an artist, read the views of other members, or follow links to audio clips of music. There is also a facility for buying albums on-line.

By now you're probably thinking that Firefly sounds more like the kind of system that might be popular with American undergraduates, and not really the kind of tool that has any use for serious research. The point to be made here is that it is important to think about the other possible scenarios in which a tool such as FireFly could be used. Imagine, for example, a group of social scientists using a Firefly-like tool to create a rating system for social science resources on the web. Researchers could input a set of keywords describing the type of material they are searching for and then have their request cross-matched against thousands of others in the database. It would also be possible to build up individual user profiles of research needs, so that you could send Firefly out on a regular basis to traverse its database or other publicly accessible databases to find potentially useful material which has been rated as useful by others working in your field.

Interestingly, FireFly have also recently announced a collaboration with Yahoo to create a website recommendation service. This will work in a similar way to the music and movie recommendation service in that users will be able to build up their own profile of web sites they find useful, and get recommendations for new sites based on their profile and the profiles of other users [2].

One word of caution with FireFly: you do have to spend quite a lot of time inputting your preferences in order for FireFly to build up a useful and accurate picture of your tastes. This can be time-consuming; so unless you are prepared to dedicate a fair amount of time initially in order to let FireFly get to know you, you may find that you are disappointed with the results it produces.

FireFly is available [3] over the Web.

## Autonomy

Autonomy provides you with a whole suite of different intelligent agents to suit a variety of searching needs. Autonomy isn't a web-based service; it's a package which needs to be downloaded and installed on your own PC in MS Windows. It then works with your web browser to provide searching facilities. A free 30 day trial of the product is available at the Autonomy web pages [4] and it has been available for sale in the UK since November 1996.

Autonomy agents are trained by typing a few sentences about your subject of interest into a box provided on screen; you then let the agents loose on the web and they go off to look for relevant documents. These documents are graded according to their perceived relevance to the topics you have chosen.

Autonomy enables you to create a variety of agents to search for different topics. Each agent has to be individually trained, and they are then released onto the web by dragging them onto a web icon on screen. The agent will then start to search the web for your chosen subject. As it searches you will see a graphical map of the sites it is exploring appear on screen as it moves from one server to another. Once your agent has finished searching it displays a list of sites it has found. You can then review these sites and accept those that appear to be relevant to your information needs. Autonomy will create a library for the sites you have accepted and use this information to refine its searching the next time you ask it to perform a search on that particular topic.

It is possible to send your Autonomy agent off on a web search and leave it running in the background whilst you get on with other work. However, I found that you do need a fairly fast PC for this to work well; my PC suffered quite a bit under the strain of having both Autonomy and Word 6 open at the same. The searching process seems to be fairly slow, although this problem could be avoided by setting the agent up to search over evenings or weekends.

I also had some difficulties making sense of the results I got from my Autonomy agent, as the sites it retrieved didn't necessarily seem to relate to the topic I had requested. Recent discussions on the lis-ukolug mailing list [5] show that other users seem to have encountered this problem as well. Certainly, help information on how to train your agent effectively isn't very clear, and is presented in a way of screen which makes it difficult to read easily. It may be necessary to spend quite a bit of time thinking about your search query and how best to frame this to get the results you need.



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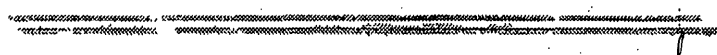
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# USING AN INTELLIGENT AGENT TO ENHANCE SEARCH ENGINE PERFORMANCE



by JAMES JANSEN

## **Abstract**

*The amount of information available via networks and databases has rapidly increased and continues to increase. Existing search and retrieval engines provide limited assistance to users in locating the relevant information that they need. Autonomous, intelligent agents may prove to be the needed item in transforming passive search and retrieval engines into active, personal assistants. This proposal explores the quantity of information available that is driving the need for improved search and retrieval engines. It then reviews current information retrieval literature and agency literature. Following these reviews, it proposes that the combination of effective information retrieval techniques and autonomous, intelligent agents can improve the performance of short-term information retrieval in an existing search or retrieval engine. A review of the current status of agents in various areas including information retrieval is also presented. The proposal then presents the objectives of this research, the methodology to achieve these objectives, and concludes with the contributions of this research and a short summary.*

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## **Introduction**

The amount of information available via networks and databases has increased and is still rapidly increasing. Existing search and retrieval engines provide limited assistance to users in locating the relevant information they need. Autonomous, intelligent agents may prove to be the needed item in transforming passive search and retrieval engines into active, personal assistants. I propose that the combination of effective information retrieval techniques and autonomous, intelligent agents can improve the performance of an existing search or retrieval engine. This paper explores the increasing quantity of information available and the need for improved search and retrieval engines. It then reviews current information retrieval literature and agency literature. The paper then presents the objectives of this research along with the methodology to achieve these objectives. The paper concludes with the contributions of this research and a short summary.

### **Information Abundance**

The World Wide Web (Web) is one of the largest publicly available databases of documents, and it is a good testing ground for most retrieval techniques. The Web organizes information by employing a hypertext paradigm. Users can explore information by selecting hypertext links to other information. As the Web continues its explosive growth, the need for searching tools to access the Web is increasing. Yahoo! is the big name in Web directories. A pair of Stanford graduate students founded Yahoo! in 1995. Recently, a host of new search and directory sites offer a wide range of Web-searching services [ 23 ]. Examples include Alta Vista, InfoSeek, Open Text and Excite. However, these search engines are not as sophisticated as one might expect.

For example, Alta Vista presents the documents that the search engine expects one would find most relevant at the top of the list. The search engine ranks documents from highest to lowest based on:

- Include all of the search terms in the document.
- Include as many of the other desirable search criteria as possible in the document.

These other desirable search criteria are: number of times the terms appear, proximity of the terms to each other, and proximity of the terms to the beginning of the document. Because of the details of how the scoring occurs, one might experience some unexpected results. The Alta Vista algorithm gives a higher score to unique and unusual words. For instance, if one enters albatross boat fishing in the search box, documents that had many instances of albatross near the beginning or in the title of the document would have a high score. These documents might reduce the priority of documents that had all three search terms together [ 2, 36 ]. Obviously, this is not the best search method. Clearly, one needs to add more personal services to optimize information retrieval for the Web [ 18 ].

The explosive growth of information is not only occurring on the Web but also with on-line databases. The number of on-line databases increased from



5000 in 1994 to 5800 in 1996 [ 37, 38 ]. This number is in addition to the 4600 batch databases that are available via computer networks[ 38 ]. Databases are also getting larger. NCR recently opened the world's largest data warehouse. NCR's data warehouse has a capacity of 11 terabytes, which is equivalent to 2.75 billion pages of text, or roughly enough to fill 220,000 four-drawer filing cabinets [ 4 ]. The PC revolution makes these digital libraries very accessible. There is so much access to information that it is turning into a commodity as the law of supply and demand takes hold. For example, Dialog was one of the first in the business of selling electronic data. It is still one of the biggest with sales of about \$439million in 1993. However, profits are flat as the price for information decreases. For example, airline reservations that Dialog once sold for \$48, America On-line now sells for \$2[ 61 ]. The problem has turned from one of having information available to one of rapidly getting to the information that one needs.

As with search engines on the Web, on-line databases have problems with their retrieval engines. Research shows that users have a number of problems interacting with on-line databases. Yee[ 60 ] reviewed over 150 studies in this area. She summarizes the obstacles facing the users of on-line databases. These obstacles include: finding appropriate subject terms, a large number of hits along with failure to reduce the retrieval sets, zero hits and failure to increase the retrieval sets, and failure to understand the cataloging rules. In addition, lack of understanding of the indexes, types of files, and the basic database structure leads to the use of articles (i.e., the, a, etc.), stop words, placing the author's first name before the last name, and hyphenation problems.

Online retrieval systems are powerful and efficient at locating matching terms and phrases. They are also currently dumb, passive systems that require resourceful, active, intelligent human users to produce acceptable results. Some have suggested that the solution to information retrieval problems is to better index the Web documents and database records with items such as more key terms and conceptual indexing[ 5 ]. Enhancing millions of web pages, documents and records would be extremely costly; therefore, creating better search and retrieval engines provides a more realistic solution to the existing problems. For example, users currently employ various search techniques to fulfill their information retrieval needs. These techniques include obtaining information from footnotes and references in journals and books, identifying core journals in a discipline, searching for known authors and subjects, and browsing the materials that are physically collocated with materials located earlier in a search. These techniques play important roles in the information-seeking activities of users[ 5 ]. A solution is for the search and retrieval engines to take advantage of the information in these search techniques that aid the user in locating the needed information.

### **Information Retrieval**

Given that there exists a set of documents and a person who has an interest in the information in some of them, one can define optimal information retrieval as: Find all the relevant and none of their relevant documents[ 34 ].

The documents that contain information of interest are relevant. The other documents are not. A document can be a page of text, an article, a Web site, etc.

There are three major information retrieval paradigms [ 57 ]: statistical, semantic, and contextual. The first approach emphasizes statistical correlations of word counts in documents and document collections. Salton [ 45, 46, 48, 50 ] describes the use of statistical schemes such as vector space models for document representation and retrieval. The Smart system [ 10 ] is an example of a textprocessing and retrieval system based on the vector processing model. Another example is Latent Semantic Indexing (LSI) [ 13 ], which captures the term associations in documents. The semantic approach to information retrieval views documents and queries as representing some underlying meaning [ 49, 53 ]. It emphasizes natural language processing or the use of artificial intelligence queries. The third approach takes advantage of the structural and contextual information typically available in retrieval systems. For example, this could involve the use of a thesaurus and encoded relationships among terms. One could also take advantage of context and structure generally available from the document terms. Salton [ 45 ] has shown, however, that this approach does not necessarily improve retrieval performance.

There are two accepted standards of performance for comparing and evaluating retrieval systems, recall and precision [ 34, 47, 51, 52 ]. The definitions of these performance standards are:

Recall = Relevant Documents Retrieved / Total Number of Relevant Document

Precision = Relevant Documents Retrieved / Total Number of Retrieved Documents

There are other views of evaluating performance [ 47, 51, 57 ]. Information retrieval is almost always part of some larger process of information use. One can evaluate systems based on their support of these larger processes. Sense making is building an interpretation of the situation or queries to understand the information. Design is building an artifact from the information. Decision making is building a decision and its rationale based on the information. Response tasks are finding information to answer a query [ 42 ].

## **Agents**

### **Definition**

There are several definitions of agents [ 15, 19, 43, 44 ]. One can also describe rather than define agents in terms of their task, autonomy, and communication capabilities. Some of the major definitions and descriptions of agents are:

Agents are semi-autonomous computer programs that intelligently assist the user with computer applications. Agents employ artificial intelligence

techniques to assist users with daily computer tasks, such as reading electronic mail, maintaining a calendar, and filing information. Agents learn through example-based reasoning and are able to improve their performance over time [ 44 ].

Agents are computational systems that inhabit some complex, dynamic environment. They sense and act autonomously in this environment. By doing so, they realize a set of goals or tasks [ 27, 28, 29 ].

Agents are software robots. They can think and will act on behalf of a user to carry out tasks. Agents will help meet the growing need for more functional, flexible, and personal computing and telecommunications systems. Uses for intelligent agents include self-contained tasks, operating semi-autonomously, and communication between the user and systems resources [ 3, 16 ].

The definition and description of an agent for this research are: Agents are software programs that implement user delegation. Agents manage complexity, support user mobility, and lower the entry level for new users. Agents are a design model similar to client-server computing, rather than strictly a technology, program, or product [ 20 ].

### Issues

Two issues concerning agents are trust and competence [ 8, 14, 28, 32 ]. Concerning trust [ 8, 28 ], the user and other members of the user community must be able to trust that the agent does only what the user wants done. The user must feel comfortable delegating tasks to the agent. As for competence, the agent must first acquire the skills to accomplish the delegated tasks [ 6, 7, 9, 28, 39, 40 ]. The agent must also be able to decide when to help the user and how to help the user.

### Architecture

There are three major paradigms for building agents [ 28, 31 ]. The first approach makes the agent an integrated part of the end-program. The advantage here is that the user trusts the agent because the rules are set. The problem is with competence. A combined agent and end-program requires too much insight from the user. The user must have the knowledge to effectively employ the agent. The second approach is a knowledge-based approach, where the agent has extensive domain-specific information about the application. Competence is a problem with this approach because it requires a huge amount of knowledge from the knowledge engineer. Trust is also a problem since the agent is usually autonomous from the start, which gives users a feeling of loss of control and lack of understanding [ 56 ]. The final approach is a learning approach, where the agent has some knowledge of the domain but learns what the user would like it to do based on user actions. The learning approach has the advantages of the other two approaches while minimizing their disadvantages. The learning approach is the architectural paradigm that this research will use.

### Objectives

The objective of this research is that an autonomous, intelligent agent can "rapidly" customize a search or retrieval engine query's result. The agent uses both user preferences and information content of the document and query. The end product of this research will be an autonomous, intelligent agent that resides with an existing search or retrieval engine. This combination will result in improved information retrieval performance for the user. Specifically, the goals of this research are:

To improve the information retrieval performance of a search or retrieval engine based on specified, measurable attributes and relative to the increased cost of adding the agent.

To develop an autonomous, intelligent agent that will reside with an existing search or retrieval engine. The addition of the agent should be as transparent as possible to the existing user interface or front-end of the engine. The agent will monitor the user's actions to prioritize the remaining query results. The agent will learn based on the user's preferences and information content of the queries and documents.

To develop a method for rapid agent learning of user preferences during each user session on the engine.

To integrate an information retrieval algorithm, a user preference algorithm, an existing search or retrieval engine, and a agent.

### **Current Status**

Negroponce [ 35 ] and Kay [ 21 ] were among the first to recognize the potential value of agents. A number of researchers have explored the use of agents for information filtering, cataloging, and delegation [ 34 ]. Information filtering is similar to information retrieval. In information retrieval, one views the user actively searching for relevant information in a mass of largely irrelevant information. With information filtering, one views the user as largely passive as mostly relevant information flows past the user [ 57 ]. The following three subsections provide some specific examples of current agent systems.

### **Agent Systems**

#### **Email Systems**

Tapestry is an experimental mail system developed at the Xerox Palo Alto Research Center intended as a replacement for current e-mail systems. In addition to content-based filtering, the Tapestry system supports collaborative filtering. Collaborative filtering simply means that people collaborate to help each other perform filtering by recording their reactions, or annotations, to documents they read. When a Tapestry user installs a filter that uses annotations, the Tapestry system returns documents matching that filter. One can think of Tapestry filters as agents running continuously. The primary technical innovation in Tapestry is an efficient algorithm for implementing filter queries that have predictable semantics [ 17 ].

### **Decision Support Systems**

Most Group Decision Support Systems do not include either basic or automated information retrieval capabilities to aid users in making better decisions. Participants often rely on the meeting facilitator for their information requirements. The facilitator may have difficulty comprehending the complex information requirements of the group members. Researchers at the University of Mississippi have developed a prototype knowledge-based information filtering agent that supports a group decision support system. The prototype allows group members to query an on-line knowledge base of facts using normal English syntax. This relieves the user of the need to know the location of relevant information or how to retrieve it. A case study of student groups using this information retrieval agent shows the feasibility of the technique for the development of group decision support systems [ 1 ].

### **User Interfaces**

The area of user interfaces is an especially fruitful area for the employment of agents [ 22, 24, 26, 54, 55 ]. Researchers at the IBM Intelligent Agent Group [ 20 ] state that soon user interfaces without agents will no longer be viable in the marketplace. Agents can implement a style of interaction referred to as indirect management. Instead of commands and direct manipulation, the user and the system are in a cooperative process. Both the user and computer agents perform communication, monitor events, and perform tasks [ 26, 28 ]. The Information Visualizer is an experimental system to develop a new user interface paradigm for information retrieval. The Information Visualizer attempts to utilize advanced graphics technology to lower the cost of finding and accessing information. The Information Visualizer uses four broad strategies, which are: making the user's immediate workspace larger, enabling user interaction with multiple agents, increasing the real-time interaction rate between user and system, and using visual abstraction to speed information assimilation [ 42 ].

### **Teleconferencing**

M is a software assistant that uses a society of agents working together. M attempts to recognize, classify, index, store, retrieve, explain, and present information in a desktop multimedia conferencing environment. M is a software system that integrates multiple reasoning agents. The agent's collaborative results serve to assist a user working together with other individuals in an electronic conference room [ 41 ].

### **Telecommunications**

Guilfoyle [ 11 ] sees network management as the biggest application to be affected by agents in the short to medium term [ 9 ]. Some companies are already placing "embedded intelligence" into their network products. Guilfoyle states that most hardware vendors will embed the intelligent agents in servers, routers, and hubs. SynOptics Communications is strongly involved in agent development, especially in its global enterprise management architecture. This architecture is intended to eventually manage communications with a single software application. Besides network management, agents will also become an integral part of messaging systems. PersonaLink is a messaging service by AT&T that uses agents [ 11 ].

### **Calendar Systems**

Calendar Apprentice (CAP) is a learning assistant that performs calendar management. CAP learns its users' scheduling preferences from experience. Mitchell [ 34 ] has studied the benefits of CAP based on approximately 5 user-years of experience. CAP has learned an evolving set of several thousand rules that characterize scheduling preferences for each of its users. Considering this experience, machine-learning methods may play an important role in future personal software assistants [ 34 ].

### **Entertainment**

Many forms of entertainment could benefit from the casting of intelligent agents as entertaining characters [ 30, 31, 39, 55 ]. ALIVE is an example of such a system. ALIVE allows users to enter a virtual world and use full-body images to interact with animated agents. In ALIVE, a user sees his or her own image surrounded by three-dimensional agents and objects in a screen of approximately 16 by 16 feet. ALIVE implements different virtual worlds that the user can switch by pressing a virtual button. Different agents inhabit each world. Current agents include a puppet, a dog, a hamster, and a predator. The behavior of an agent depends on its traits, the location, and the gestures of the user and other agents. For example, the hamster will avoid objects, follow the user around, and beg for food.

### **WebWanders**

Web Robots, wanderers, and spiders are all names for programs that automatically traverse the Web. Next to macros, they are the most successful class of agent systems. Two examples are Harvest and Searchbots. Harvest is a resource discovery robot that is part of the Harvest Project. Harvest runs from the University of Colorado and also from Texas A&M. Harvest's motivation is to index topic specific collections rather than to locate and index all HTML objects that it can find. Also, Harvest allows users to control the enumeration several ways, including stop lists, depth limits, and count limits. Therefore, Harvest provides a much more controlled way of indexing the Web than is typical of other robots [ 19 ]. CIG Searchbots are a very simple example of cooperative information gathering, which is a multi-agent approach to information retrieval. The CIG Searchbots is not a database search engine tool. To satisfy one's query, multiple agents actually perform search at heterogeneous remote sites via the Web. Some of the search methods may include using existing database search engines. Domain experts determine what sites to search and the path to the best solution. The best solution is the one with the lowest search cost [ 12 ].

### **FAQ Systems**

CYLINA (CYberspace Leveraged INtelligent Agent) is an agent system that gains information through interactions with a large population of network users. Instead of depending on the efforts of a few knowledge engineers, CYLINA relies on small, incremental contributions from a large population of experts. CYLINA assumes that the sheer volume of interaction will allow the system to acquire a significant amount of knowledge in a short amount of time. Auto-FAQ is an experimental system currently under development at

GTE Laboratories that uses the CYLINA paradigm. Auto-FAQ attempts to make information typically found in USENET News FAQs much more accessible. Auto-FAQ is a question-answer system. Users ask questions in natural language forms. These questions index directly into the system's information base [ 59 ].

#### **USENET Archives**

Newt [ 57 ] is an example of an information filtering system utilizing a society of agents that inhabit the user's computer. Each agent is a user profile. Each profile searches for documents that match itself and recommends these documents to the user. The user can provide feedback to the agent for the documents recommended. User feedback causes two effects. One, it changes the fitness of the profiles. If the user provides positive or negative feedback for a document, the fitness of the profile that retrieved that document is either increased or decreased. Second, user feedback modifies the profile. Therefore, each agent learns during its lifetime. The population continually adapts to the changing needs of the user.

#### **Graphical Editor**

Mondrian is a graphical editor that can learn new graphical procedures through programming by demonstration. An agent records the steps of a procedure while the user demonstrates the sequence of a command. The agent generalizes a macro that the user can use on "analogous" examples. The generalization heuristics make this agent different from conventional macros, which can only repeat an exact sequence of steps [ 25 ].

#### **Commercial Agents**

##### **AppleSearch**

AppleSearch is an agent system that searches and retrieves text from computers linked together by the AppleShare, Apple's file sharing application, or by System 7's personal file sharing capabilities. Up to 50 users can operate on a network as AppleSearch clients. AppleSearch uses agents, using Apple's XTND technology, to examine text and to read and index documents that exist in a variety of formats [ 58 ].

##### **NewWave**

Hewlett-Packard's NewWave agent feature is arguably the oldest commercial agent system. It provides simple intelligent macro capabilities. NewWave uses the agent feature to automate simple tasks, and provide department-level or company-wide customization of interfaces. It also uses agents to link files with their required application and to link files together [ 33 ].

##### **OpenSesame!**

The OpenSesame! learning interface agent uses hybrid neural network and knowledge-based systems technology to observe its user's actions in the Macintosh System 7 environment. OpenSesame! will customize the interface, automate regular tasks, and make suggestions for easier ways to carry out operations [ 19 ].

## Performance Evaluations

Although there are various agent systems that accomplish many tasks, there is little performance evaluation of agent systems compared to non-agent systems. Since many agent systems are built from the ground up, it is extremely difficult to perform a performance evaluation. Many of the reported performance enhancements of agent systems are not statistical evaluations. Instead, human factors or human information processing characteristics are the bases for these expected performance improvements [ 1, 34, 55 ]. Clearly, other factors could prevent the expected performance increase from occurring. Performance evaluations would be useful and are necessary for validating the benefit of agents.

## Procedures

1. Obtain access to a search or retrieval engine for an information database.
2. Build an autonomous, intelligent agent that learns from both user actions and from the information content of queries and documents. Examples of user actions from which the agents could learn would be: saving the location of a site or query result, printing a document or query result, the time spent on a document, and query results that the user passes up.
3. Integrate the agent, the search or retrieval engine, the user preference algorithm, and an information retrieval algorithm.
4. Compare the performance of a group of users using the original search or retrieval engine versus their performance using the agent-enhanced engine.

## Contributions of Research

Development of an autonomous, intelligent agent that uses a user preference algorithm based on short-term user preferences. Existing information filtering agents develop profiles of user preferences over an extended time-frame. For this project, the agent would immediately begin to make decisions based on the information available, regardless of the quantity.

Linking of such an agent and algorithm to an existing application. Most current agent systems are replacements for existing applications; therefore, they do not lend themselves to performance evaluations against traditional non-agent systems.

The use of an existing front-end may address the trust and competence issues. The original query defines the scope and temporal existence of the agent. When the user-session ends, the agent "releases" all knowledge of the user's preferences. The user can also make a determination on the competence of the agent, since the agent's performance (i.e., prioritizing of the remaining query results) is immediately apparent to the user.

Provide performance comparison testing to validate or invalidate the benefit



of this approach in information retrieval.

### **Conclusion**

There is an increased amount of information available on the Web and an increase in the number of on-line databases. This information abundance increases the complexity of locating relevant information. Complexity drives the need for improved search and retrieval engines. Current search and retrieval engines are primarily passive instruments. Intelligent agents may be the way to improve search and retrieval engines, making them active personal assistants. The combination of the search and retrieval engines, the agent, the user preference algorithm, and the information retrieval algorithm addresses the trust and competence issues of agents. The user controlling the parameters and temporal existence of the agents via the query of the search and retrieval engine ensures an element of trust. The user gets continual feedback from the agent via the agent's prioritizing of the remaining query results, which addresses the competence issue. Although there are several agent systems currently, there is no performance data comparing the agent-system with a traditional, non-agent system. The use of an existing search and retrieval engine with the addition of an agent will allow for performance measurements. This technique also permits the continued use of a known user interface for the engine.

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# BIG: A Resource-Bounded Information Gathering Agent

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## UMass Computer Science Technical Report 1998-03

### Abstract:

Effective information gathering on the WWW is a complex task requiring planning, scheduling, text processing, and interpretation-style reasoning about extracted data to resolve inconsistencies and to refine hypothesis about the data. This paper describes the rationale, architecture, and implementation of a next generation information gathering system - a system that integrates several areas of AI research under a single research umbrella. The goal of this system is to exploit the vast amount of information sources available today on the NII including a growing number of digital libraries, independent news agencies, government agencies, as well as human experts providing a variety of services. The large number of information sources and their different levels of accessibility, reliability and associated costs present a complex information gathering coordination problem. Our solution is an information gathering agent, BIG, that plans to gather information to support a decision process, reasons about the resource trade-offs of different possible gathering approaches, extracts information from both unstructured and structured documents, and uses the extracted information to refine its search and processing activities.

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## Introduction

The vast amount of information available today on the World Wide Web (WWW) has great potential to improve the quality of decisions and the productivity of consumers. However, the WWW's large number of information sources and their different levels of accessibility, reliability and associated costs present human decision makers with a complex information gathering planning problem that is too difficult to solve without high-level filtering of information. In many cases, manual browsing through even a limited portion of the *relevant* information obtainable through advancing information retrieval (IR) and information extraction (IE) technologies [2,12,9] is no longer effective. The time/quality/cost tradeoffs offered by the collection of information sources and the dynamic nature of the environment lead us to conclude that the user cannot (and should not) serve as the detailed controller of the information gathering (IG) process. Our solution to this problem is to integrate different AI technologies, namely scheduling, planning, text processing, and interpretation problem solving, into a single information gathering agent, BIG (resource-Bounded Information Gathering), that can take the role of the human information gatherer.

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## Information Gathering as Interpretation

Our approach to the IG problem is based on two observations. The first observation is that a significant portion of human IG is itself an intermediate step in a much larger *decision-making process*. For example, a person preparing to buy a car may search the Web for data to assist in the decision process, e.g., find out what car models are available, crash test results, dealer invoice prices, reviews and reliability statistics. In this information search process, the human gatherer first *plans* to gather information and reasons, perhaps at a superficial level, about the time/quality/cost trade-offs of different possible gathering actions before actually gathering information. For example, the gatherer may know that Microsoft CarPoint site has detailed and varied information on the models but that it is slow, relative to the Kelley Blue Book site, which has less varied information. Accordingly, a gatherer pressed for time may choose to browse the Kelley site over CarPoint, whereas a gatherer with unconstrained resources may choose to browse-and-wait for information from the slower CarPoint site. Human gatherers also typically use information learned during the search to refine and recast the search process; perhaps while looking for data on the new Honda Accord a human gatherer would come across a positive review of the Toyota Camry and would then broaden the search to include the Camry. Thus the human-centric process is both top-down and bottom-up, structured, but also opportunistic. The final result of this semi-structured search process is a decision or a suggestion of which product to purchase, accompanied by the extracted information and raw supporting documents.

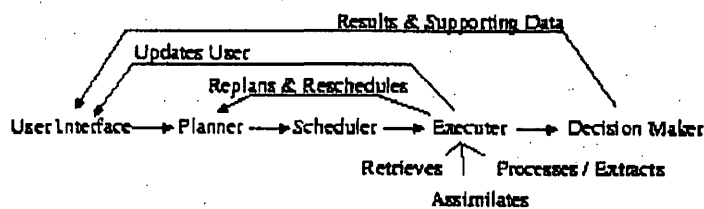
The second observation that shapes our solution is that WWW-based IG is an instance of the *interpretation problem*. Interpretation is the process of constructing high-level models (e.g. product descriptions) from low-level data (e.g. raw documents) using feature-extraction methods that can produce evidence that is incomplete (e.g. requested documents are unavailable or product prices are not found) or inconsistent (e.g. different documents provide different prices for the same product). Coming from disparate sources of information of varying quality, these pieces of uncertain evidence must be carefully combined in a well-defined manner to provide support for the interpretation models under consideration.

In recasting IG as an interpretation problem, we face a search problem characterized by a generally combinatorially explosive state space. In the IG task, as in other interpretation problems, it is impossible to perform an exhaustive search to gather information on a particular subject, or even in many cases to determine the total number of instances (e.g. particular word processing programs) of the general subject (e.g. word processing) that is being investigated. Consequently, any solution to this IG problem needs to support reasoning about tradeoffs among resource constraints (e.g. the decision must be made in 1 hour), the quality of the selected item, and the quality of the decision process (e.g. comprehensiveness of search, effectiveness of IE methods usable within specified time limits). Because of the need to conserve time, it is important for an interpretation-based IG system to be able to save and exploit information about pertinent objects learned from earlier forays into the WWW. Additionally, we argue that an IG solution needs to support *constructive problem solving*, in which potential answers (e.g. models of products) to a user's query are incrementally built up from features extracted from raw documents and compared for consistency or suitability against other partially-completed answers.

In connection with this incremental model-building process, an interpretation-based IG problem solution must also support sophisticated scheduling to achieve *interleaved* data-driven and

expectation-driven processing. Processing for interpretation must be driven by expectations of what is reasonable, but, expectations in turn must be influenced by what is found in the data. For example, during a search to find information on word processors for Windows95, with the goal of recommending some package to purchase, an agent finding Excel in a review article that also contains Word 5.0 might conclude based on IE-derived expectations that Excel is a competitor word processor. However, scheduling of methods to resolve the uncertainties stemming from Excel's missing features would lead to additional gathering for Excel, which in turn would associate Excel with spreadsheet features and would thus change the expectations about Excel (and drop it from the search when enough of the uncertainty is resolved). Where possible, the scheduling should permit parallel invocation of IE methods or requests for WWW documents.

**Figure:** BIG's Problem Solving Control Flow



To illustrate our objective, consider a simple sketch of BIG in action. A simplified control flow view of this BIG sketch is shown in Figure 1. A client is interested in finding a drawing program for Windows95. The client submits goal criteria that describes desired software characteristics and specifications for BIG's search-and-decide process. The search parameters are *quality importance = 80%*, *time importance = 20%*, *soft time deadline of 20 minutes*, *hard cost limitation of 0*. This translates into emphasizing quality over duration, a preference for a response in 20 minutes if possible, and a hard constraint that the search use only free information. The product parameters are: *product price: \$200 or less*, *platform: Windows95*, *usefulness importance rating 100 units*, *future usefulness rating 25*, *product stability 100*, *value 100*, *ease of use 100*, *power features 25*, *enjoyability 100*. The client is a middle-weight home-office user who is primarily concerned with using the product today with a minimum of hassles but who also doesn't want to pay too much for power user features. Upon receipt of the criteria, BIG first invokes its planner to determine what information gathering activities are likely to lead to a solution path; activities include retrieving documents from known drawing program makers such as Corel and MacroMedia as well as from consumer sites containing software reviews, such as the Benchin Web site. Other activities pertain to document processing options for retrieved text; for a given document, there are a range of processing possibilities each with different costs and different advantages. For example, the heavyweight information extractor pulls data from freeformat text and fills templates and associates certainty factors with the extracted items. In contrast, the simple and inexpensive pattern matcher attempts to locate items within the text via simple grep-like behavior. These problem solving options are then considered and weighed by the task scheduler that performs quality/cost/time trade-off analysis and determines a course of action for BIG. The resulting schedule is then executed; multiple retrieval requests are issued and documents are retrieved and processed. Data extracted from documents at the MacroMedia site is integrated with data extracted from documents at the Benchin site to form a product description object for MacroMedia Freehand. However, when BIG looks for information on Adobe Illustrator at the Benchin site it also comes across products such as the Bible Illustrator for Windows, and creates product description objects for these products as well. After sufficient information is gathered, and the search resources nearly consumed, BIG then compares the different product objects and selects a

product for the client. In this case, BIG's data indicates that the "best" product is MacroMedia Freehand though the academic version is the specific product that is below our client's price threshold. (The regular suggested retail price is \$595.) BIG returns this recommendation to the client along with the gathered information and the corresponding extracted data.

Though the sketch above actually illustrates one of the problem areas of BIG's text processing, that is identifying special versions of products, it illustrates one of the cornerstones of our approach to the information explosion - we believe that retrieving relevant documents is not a viable end solution to the information explosion. The next generation of information systems must use the information to make decisions and thus provide a higher-level client interface to the enormous volume of on-line information. Our work is related to other agent approaches [16] that process and use gathered information, such as the WARREN [6] portfolio management system or the original BargainFider [11] agent or Shopbot [8], both of which work to find the best available price for a music CD. However, our research differs in its direct representation of, and reasoning about, the time/quality/cost trade-offs of alternative ways to gather information, its ambitious use of gathered information to drive further gathering activities, its bottom-up and top-down directed processing, and its explicit representation of sources-of-uncertainty associated with both inferred and extracted information.

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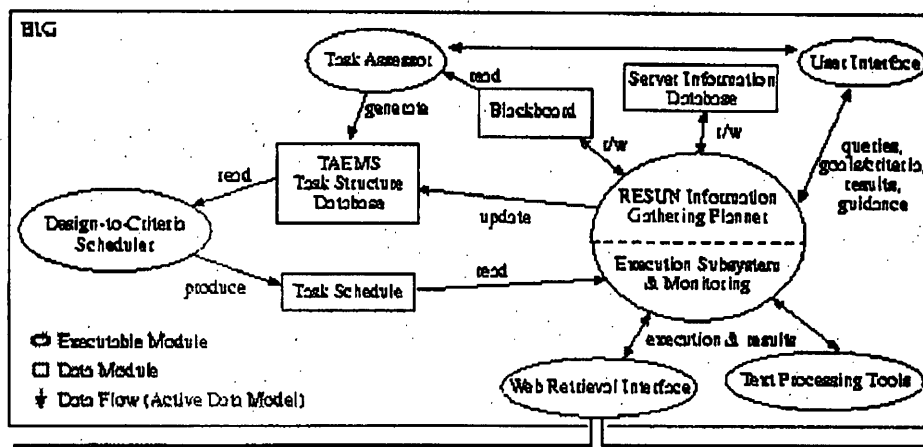
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## The BIG Agent Architecture

The overall BIG agent architecture is shown in Figure 2. The agent is comprised of several sophisticated components that are complex problem solvers and research subjects in their own rights. The integration of such complex components is a benefit of our research agenda. By combining components in a single agent, that have hereto been used individually, we gain new insight and discover new research directions for the components. The most important components, or component groups, follow in rough order of their invocation in the BIG agent.

**Figure:** The BIG Agent Architecture



### Task Assessor

The task assessor is responsible for formulating an initial information gathering plan and then for revising the plan as new information is learned that has significant ramifications for the plan currently being executed. The task assessor is not the execution component nor is it the planner that actually determines the details of how to go about achieving information gathering goals; the task assessor is a component dedicated to managing the high-level view of the information gathering process and balancing the end-to-end top-down approach of the agent scheduler (below) and the opportunistic bottom-up RESUN planner (also below). The task assessor receives an initial information gathering goal specification from an external decision maker, which can be a human or another sophisticated automated component, and then formulates a family of plans for gathering the necessary information. The task assessor has a model of the goals that can be achieved by the RESUN planner and the performance characteristics and parameters of the actions that RESUN will employ to achieve the goals. The task assessor combines this knowledge with previously learned information stored in the server and object databases (below) and generates a set of plans that delineates alternative ways to go about gathering the information and characterizes the different possibilities statistically in three dimensions quality, cost, and duration, via discrete probability distributions. The task assessor encodes the plans in the TÆMS [7] generic, domain-independent task modeling framework.

The TÆMS models then serve as input to the agent scheduler and other agent control components that will be added in the future (e.g., a multi-agent coordination module).

### Object Database

Used initially by the task assessor when determining possible courses of action, the object database is also used by the RESUN planner during information gathering sessions. As the planner creates information objects they are stored in the object database for use during future information gathering sessions. The stored objects may be incomplete and may have uncertainties attached to them, however, the uncertainties and incompleteness can be filled in the next time the object is used to address a query. Through the object database and the server information database (below), BIG learns during problem solving. Information and resources learned and discovered are stored for subsequent information gathering activities. The issue of aging stored data and a detailed discussion on learning are beyond the scope of this paper.

### Server Information Database

The server database is used by the task assessor to help generate its initial list of information gathering options and again during the actual search process by the RESUN planner when the information gathering activities actually take place. The database is used to seed the initial search and queried as new products are discovered. The database contains records identifying both primary and secondary information sources on the Web. Accompanying the sources are attributes that describe the sources' retrieval times and costs, their quality measures (see below), keywords relevant to the sources, and other related items. The database is constructed by an offline Web spider and modified during the search process to reflect newly discovered sites and data. This object has information aging concerns similar to those of the object database.

### Modeling Framework

The TÆMS [7] task modeling language is used to hierarchically model the information gathering process and enumerate alternative ways to accomplish the high-level gathering goals. The task structures probabilistically describe the quality, cost, and duration characteristics of each primitive action and specify both the existence and degree of any interactions between tasks and primitive methods. For instance, if the task of *Find-Competitors-for-WordPerfect* overlaps with the task of *Find-Competitors-for-MS-Word* (particular bindings of the general *Find-Competitors-for-Software-Product* task) then the relationship is described via a mutual facilitation and a degree of the facilitation specified via quality, cost, and duration probability distributions. TÆMS task structures are stored in a common repository and serve as a domain independent medium of exchange for the domain-independent agent control components; in the single agent implementation of BIG, TÆMS is primarily a medium of exchange for the scheduler, below, the task assessor, and the RESUN planner.

### Design-to-Criteria Scheduler

Design-to-Criteria [14,15] is a domain independent real-time, flexible computation [10,5,13] approach to task scheduling. The Design-to-Criteria task scheduler reasons about quality, cost, duration and uncertainty trade-offs of different courses of action and constructs custom satisficing schedules for achieving the high-level goal(s). The scheduler provides BIG with the ability to reason about the trade-offs of different possible information gathering and processing activities, in light of the client's goal specification (e.g., time limitations), and to select a course of action that best fits the client's needs and the current problem solving context. The scheduler receives the TÆMS models generated by the task assessor as input and the generated schedule is returned to the RESUN planner for execution.

### RESUN Planner

The RESUN [3,4] (pronounced "reason") blackboard based planner/problem solver directs information gathering activities. The planner receives an initial action schedule from the scheduler and then handles information gathering and processing activities. The strength of the RESUN planner is that it identifies, tracks, and plans to resolve sources-of-uncertainty (SOUs) associated with blackboard objects, which in this case correspond to gathered information and hypothesis about the information. For example, after processing a software review, the planner may pose the hypothesis that Corel Wordperfect is a Windows95 wordprocessor, but associate a SOU with that hypothesis that identifies the uncertainty associated with the extraction technique used. The planner may then decide to resolve that SOU by using a different extraction technique or finding corroborating evidence elsewhere. RESUN's control mechanism is fundamentally opportunistic - as new evidence and information is learned, RESUN may elect to work on whatever particular aspect of the information gathering problem seems most fruitful at a given time. This behavior is at odds with the end-to-end resource-addressing trade-off centric view of the scheduler, a view necessary for BIG to meet deadlines and address time and resource objectives. Currently RESUN achieves a subset of the possible goals specified by the task assessor, but selected and sequenced by the scheduler. However, this can leave little room for opportunism if the goals are very detailed, i.e., depending on the level of abstraction RESUN may not be given room to perform opportunistically at all. This is a current focus of our integration effort. In the near term we will complete a two-way interface between RESUN and the task assessor (and the scheduler) that will enable RESUN to request that the task assessor consider new information and replan the end-to-end view accordingly. Relatedly, we will support different levels of abstraction in the plans produced by the task assessor (and selected by the scheduler) so we can vary the amount of room left for RESUN's run-time opportunism and study the benefits of different degrees of opportunism within the larger view of a scheduled sequence of actions.

### Web Retrieval Interface

The retriever tool is the lowest level interface between the problem solving components and the Web. The retriever fills retrieval requests by either gathering the requested URL or by interacting with both general (e.g., InfoSeek), and site specific, search engines. Through variable remapping, it provides a generic, consistent interface to these interactive services, allowing the problem solver to pose queries without knowledge of the specific server's syntax. In addition to fetching the requested URL or interacting with the specific form, the retriever also provides server response measures and preprocesses the html document, extracting other URLs possibly to be explored later by the planner.

### Information Extractors

The ability to process retrieved documents and extract structured data is essential both to refine search activities and to provide evidence to support BIG's decision making. For example, in the software product domain, extracting a list of features and associating them with a product and a manufacturer is critical for determining whether the product in question will work in the user's computing environment, e.g., RAM limitations, CPU speed, OS platform, etc. BIG uses several information extraction techniques to process unstructured, semi-structured, and structured information. The information extractors are implemented as knowledge sources in BIG's RESUN planner and are invoked after documents are retrieved and posted to the blackboard. The information extractors are:

#### texttext-ks

This knowledge source processes unstructured text documents using the CRYSTAL [2] information extraction system to extract particular desired data. The extraction component uses a combination of learned domain-specific extraction rules, domain knowledge, and knowledge of sentence construction to identify and extract the desired information. This component is a heavy-weight NLP style extractor that processes

documents thoroughly and identifies uncertainties with extracted data.

**grep-ks**

This featherweight KS scans a given text document looking for a keyword that will fill the slot specified by the planner. For example, if the planner needs to fill a product name slot and the document contains "WordPerfect" this KS will identify WordPerfect as the product, via a dictionary, and fill the product description slot.

**cgrepext-ks**

Given a list of keywords, a document and a product description object, this middleweight KS locates the context of the keyword (similar to paragraph analysis), does a word for word comparison with built in semantic definitions thesaurus and fills in the object accordingly.

**tablext-ks**

This specialized KS extracts tables from html documents, processes the entries, and fills product description slots with the relevant items. This KS is trained to extract tables and identify table slots for particular sites. For example, it knows how to process the product description tables found at the Benchin review site.

**quick-ks**

This fast and highly specialized KS is trained to identify and extract specific portions of regularly formatted html files. For example, many of the review sites use standard layouts.

**Decision Maker**

After product information objects are constructed BIG moves into the decision making phase. In the future, BIG may determine during decision making that it needs more information, perhaps to resolve a source-of-uncertainty associated with an attribute that is the determining factor in a particular decision, however, currently BIG uses the information at hand to make a decision. Space precludes full elucidation of the decision making process, however, the decision is based on a utility calculation that takes into account the user's preferences and weights assigned to particular attributes of the products and the confidence level associated with the attributes of the products in question.

Currently, all of these components are implemented, integrated, and undergoing testing. However, we have not yet fully integrated all aspects of the the RESUN planner at this time. In terms of functionality, this means that while the agent plans to gather information, analyzes quality/cost/duration trade-offs, gathers the information, uses the IE technology to break down the unstructured text, and then reasons about objects to support a decision process, it does not respond opportunistically to certain classes of events. If, during the search process, a new product is discovered, the RESUN planner may elect to expend energy on refining that product and building a more complete definition, however, it will not generate a new top down plan and will not consider allocating more resources to the general task of gathering information on products. Thus, while the bindings of products to planned tasks are dynamic, the allocations to said tasks are not. This integration issue is currently being solved. We return to this issue later in the paper.

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*Thomas A. Wagner*

1/26/1998



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## BIG in Action

To provide a more concrete example of how BIG operates, let us walk through a sample run. The domain for this example is word processing software, where a client uses the system to find the most appropriate package, given a set of requirements and constraints. A complete high-level execution trace for this example is shown in Figure 3. The query process begins with a user specifying search criteria, which includes such elements as the duration and cost of the search as well as desired product attributes, such as genre, price, quality and system requirements. In this example, the client desires to search for a word processor for the Macintosh costing no more than 200 dollars, and would like the search process to take about ten minutes and cost less than five dollars. The user also describes the importance of product price and quality by assigning weights to these product categories, in this case the client specified a 50/50 split between price and quality. Space precludes an in depth discussion of the product quality fields, but they include items like usefulness, future usefulness, stability, value, ease of use, power, and enjoyability.

Figure: High-Level Execution Trace

System Start CIG system start	DEGRADE F/MAC price: 139.93 processor: (Mac) main required: (4MB_RAM) platform: MAC min req: minent (1 MREQ disk CD-ROM RAM)	time is 786 check blackboard for information
Generating the task structure for this query...		LQLD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=21622"
Schedule waiting on this task structure...	Method High_Quality_Duration Ends...	LQLD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=13366"
Reading schedule output...	time is 202	LQLD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=13936"
Method Send_Query_cybout Starts...	Method Get_Back_cybout Starts...	LQLD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=13936"
time is 32 Query to search engine cybout about word processing	time is 202	LQLD: processing document: "http://www.cybout.com/cgi-bin/product_info?item=13936"
Method Send_Query_cybout Ends...	Find 61 documents	Get Object: product name: Spelling Coach Pro 4.1 company name: Detebe price: \$49.93 platform: Macintosh
time is 33	Method Get_Back_cybout Ends...	LQLD: processing document: "http://www.cybout.com/cgi-bin/product_info?item=21622"
Method Query_To_Serv DB Starts...	time is 212	Get Object: product name: Nisus Writer 3.1 Upgrade from 2.0, 3.0 or 4.0 CD-ROM company name: Nisus price: \$34.93 platform: Macintosh
time is 33 Query to Servet Database about word processing	Method Median_Quality_Duration Starts...	Method Low_Quality_Duration Ends...
Find 400 documents	time is 212 check blackboard for information	time is 312
Method Query_To_Serv DB Ends...	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=13339"	Method Advanced-Feature-Method Starts...
time is 132	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=13333"	time is 312 Looking at product review...
Method High_Quality_Duration Starts...	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=22279"	Method Advanced-Feature-Method Ends...
time is 132 check blackboard for information	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=49940"	time is 309
HQHD: Retrieving document: "http://www.warehouse.com/oaas/bin/public.asp?product_id=7283.0&next=1"	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=22133"	Method User-Review-Method Starts...
HQHD: Retrieving document: "http://www.warehouse.com/oaas/bin/public.asp?product_id=7284.0&prev=1"	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=22279"	
HQHD: Retrieving document: "http://www.warehouse.com/oaas/bin/public.asp?product_id=8333.0&next=1"	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=49940"	
HQHD: processing document: "http://www.warehouse.com/oaas/bin/public.asp?product_id=8333.0&next=1"	MQMD: Retrieving document: "http://www.cybout.com/cgi-bin/product_info?item=49940"	

Once these parameters are specified the query begins. The task assessor starts the process by first analyzing the user's parameters and then, using its knowledge about RESUN's problem solving options and its own top-down understanding of reasonable ways to go about performing the task, it generates a TÆMS task structure believed to be capable of achieving the query. Although not used in this example, knowledge learned in previous problem solving episodes may be utilized during this step by querying a database of previously discovered objects and incorporating this information into the task structure. The task structure produced for our example query can be seen in Figure 4. Note that sets of outcomes are associated with each method, where each outcome has a probability of occurring and is described statistically via discrete probability distributions in terms of quality, cost, and duration. This detail is omitted from the figure for clarity.

Once constructed, the task structure is passed to the scheduler which makes use of the user's time and cost constraints to produce a viable run-time schedule of execution. Comparative importance rankings of the search quality, cost and duration, supplied by the client, are also used during schedule creation. The sequence of primitive actions chosen by the scheduler for this task structure is also shown in Figure 4. The numbers near particular methods indicate their assigned execution order. Again, space precludes a detailed schedule with its associated probability distributions.



recommendation. A confidence measure of this decision is also calculated based on the quality of each product and the certainty of the information. This information can be seen for several trials in Figure 5

**Figure:** Five Different Results: Four with Different Time Allotments and the Fifth Generated by Using Previously Learned Knowledge

Duration (seconds)			Decision Quality			Decision Confidence		Product retrieved
Requested	Scheduled	Actual	Num. products	Info. coverage	Info. quality	Accuracy	Info. confidence	
300	572	550	3	11	3 High 0 Medium 6 Low	1.061	0.830	Acrobat 3.0 Upg. from Acrobat Pro MAC CD platform: MAC price: \$39.95 quality: 2.1
600	743	860	7	21	12 High 0 Medium 9 Low	1.068	0.860	News Writer 5.1 Upgrade from 2.0, 3.0 or 4.0 CD platform: Macintosh price: \$34.95 quality: 2.7
1200	1163	942	11	25	9 High 8 Medium 8 Low	1.073	0.860	News Writer 5.1 Upgrade from 2.0, 3.0 or 4.0 CD platform: Macintosh price: \$34.95 quality: 2.7
3400	2819	2543	23	76	28 High 16 Medium 32 Low	1.070	0.850	The Big Thesaurus V2.1 platform: Macintosh price: \$27.95 quality: 2.9
Using previously learned information								
300	572	386	21	10	3 High 0 Medium 5 Low	1.058	0.710	News Writer 5.1 Upgrade from 5.0 CD ROM platform: Macintosh price: \$29.95 quality: 2.7

Looking at Figure 5 in more detail one can obtain a reasonable view of how the system operates under different time constraints. In the first column of data we can see information relating to the duration of each search. Given is the user's requested duration, the duration expected by the schedule produced from the task structure and the actual execution time. Discrepancies may arise between the requested and scheduled times because of both how the task assessor creates the task structure and how the scheduler interprets it. For instance, valid 10 minute runs were available in the 600 second query, but a 743 second path was chosen because of its greater likelihood of producing high quality results. This sort of time/quality tradeoff is controlled in part by the parameters set in the user interface. The differences seen between the scheduled and actual time is caused simply by the fact that it is difficult to accurately predict the response time of remote services in the face of capricious network traffic.

The decision quality column reflects the number and qualities of the information sources used to generate the final decision. This attribute is based on the number of products considered, the number of documents used to obtain information and the quality rankings of these pages. The quality of the retrieved documents is based on knowledge about the quality of the source, which is generated by prior human examination. Unknown sites are ranked as medium quality. The product number and information coverage values increase given more scheduled time, as one would expect. The information quality values, however, may seem un-intuitive, since medium and low quality sources were used despite the fact that the quality of the information contained is known *a priori*. Such sites may be selected for retrieval for two reasons: they may respond quickly, and our set of tools may be able to analyze them particularly well. So a number of such sources may be used relatively cheaply, and still be useful when examined in conjunction with a high-quality source.

The decision confidence values describe how confident the system is in the information extraction and decision making processes. Information accuracy, supplied by the information processing tool, is the degree of belief that the actual extracted information is correctly categorized and placed in the information objects. Information confidence, generated by the decision maker, reflects the likelihood that the selected product is the optimal choice given the set of products considered. This value is based on the quality distributions of each product, and represents the chance that the expected quality

is correct. It should be noted that both these values are not dependent on the scheduled time. The accuracy does not change because our current information extraction tools do not produce different results with more execution time. Decision confidence, on the other hand, is based on the quality of the individual products, which are independent of execution time themselves, thus making the confidence independent.

The final decision of which product to recommend represents the sum of all these earlier efforts. The successes and failures of earlier processes are thus manifested here, which may lead to unpredictable results. For instance, in the five minute run, the system suggests that Adobe Acrobat will fulfill the client's word processing needs. This sort of error can be caused by the misinterpretation of an information source. Specifically, the phrase "word processing" was found associated with this package in a product description, which caused it to be accidentally included in the list of possible products. The subsequent 10 and 20 minute runs produced more useful results, both recommending the same word processor. After 40 minutes, though, the system has again selected a non-word processing package. This was also caused by a misunderstood product description, and was compounded by the fact that it was low-cost and well reviewed. It should also be noted, though, that the second and third place packages in this run were both highly rated word processors, namely ClarisWorks Office and Corel WordPerfect.

The final 5 minute query was performed after the 40 minute run, and made use of the previously generated objects when creating the initial task structure. These objects were also used to initially seed the object level of the RESUN blackboard. In this final search, more information was found on these objects, which decreased the expected quality of the 40 minute search's erroneously selected product, The Big Thesaurus, to 2.3 from 2.9. This small amount of extra information was sufficient for the system to discount this product as a viable candidate, which resulted in a much better recommendation in a shorter period of time, i.e., the recommendation of Nisus Writer. One may also see a dramatic difference when comparing these results with the initial 5 minute query, which had similar information coverage but many fewer products to select from, which produced a lower quality decision and selected a non-word processor product.

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## Integration Lessons and Future Work

The integration of the different AI problem solvers in BIG, namely the RESUN planner, the Design-to-Criteria scheduler, the CRYSTAL information extraction system, with each other and the web retriever agents, the different data storage mechanisms and process modeling systems, is a major accomplishment in its own right. The integration of these systems and tools has enabled us to study the systems in a different light than they have been studied in a stand-alone research environment. For example, the software product domain, one of BIG's IG areas, is a new domain for the CRYSTAL extractor that required new training and new methods for handling documents, e.g., reviews and product comparisons, that are structured differently from the genres of documents dealt with in the past (e.g., terrorist articles and medical reports). We also have an interesting extraction problem when dealing with complimentary, but not competitor products. For example, when searching for word processors BIG is likely to come across supplementary dictionaries, word processor tutorials, and even document exchange programs like Adobe Acrobat. These can be misleading to the extraction tools and to BIG in general because they are referenced much like a competitor product and the documents about these products often contain terminology that further supports the notion that they are competitors rather than complimentary products. We are experimenting with enhancements to our information extraction systems to cope with this and planning to use a tf/idf style document classifier [1] to prequalify documents before running the extraction system on them.

We have also learned new things about the Design-to-Criteria scheduler and discovered some modeling problems with applying the TÆMS task modeling framework to this application. For example, in the information gathering task structures there is a notion of search activities producing some number of documents to process, and document processing time is tied to this number of documents; additionally, the final decision making process is tied to the number of documents that are processed because with each processed document, there is some probability that it will lead to new information objects that must be considered at decision time. This dependency is data-driven and TÆMS only models certain types of domain problem solving states. We have been able to model this task adequately using existing modeling constructs, but, inaccuracies in the models sometimes lead to less-than-perfect expectations. The solution is the addition of a database resource in TÆMS that can record and model the state information pertaining to the number of documents retrieved, the number of documents processed, and the number of information objects to be considered at decision time. A secondary enhancement is the creation of new TÆMS non-local-effects to model soft task interactions, e.g., *hinders* and *facilitates*, that have an additive, rather than power-multiplier, effect.

Another major integration issue is the balance between a top-down end-to-end view of problem solving and a reactive, opportunistic view. These two views are embodied by the scheduler and the RESUN planner respectively. The scheduler designs schedules to meet real-time and real-resource performance criteria by scheduling activities from start to finish. RESUN, on the other hand, is an opportunistic problem solver that responds to newly learned information and performs processing on whatever hypothesis seems most significant at a given time step. Currently, BIG uses little of RESUN's opportunistic control to react to changes in the problem solving state. We are working on integrating the two way feedback loop between the planner, task assessor, and scheduler, that will enable the system to react, where appropriate, to changes in the problem solving state. The major issue is identifying when it is beneficial to incur the cost of rescheduling BIG's planned actions and

potentially disrupting finish time guarantees that have been communicated to the client. This tension between opportunistic, bottom-up, data-driven control and top-down process-centric control is one of the major open questions in BIG but also potentially our largest gain in terms of the ability to effectively retrieve, process, and make decisions with Web-based information. Relatedly, we also intend to study a slightly different view of BIG's control as an anytime process.

As we have discussed, the integration of these components in BIG, and the view of the IG problem as an interpretation task, has given BIG some very strong abilities. First there is the issue of information fusion. BIG does not just retrieve documents. Instead BIG retrieves information, extracts data from the information, and then combines the extracted data with data extracted from other documents to build a more complete model of the product at hand. RESUN's evidential framework enables BIG to reason about the sources of uncertainty associated with particular aspects of product object and to even work to find corroborating or negating evidence to resolve the SOUs. BIG also learns from previous problem solving episodes and reasons about resource trade-offs. As shown, given different allotments of cost and time, and even different desired quality levels, BIG can analyze its options and plan to achieve the decision goal while meeting the client's search criteria. Though cost is not an issue spotlighted in the examples in this paper, cost on the web is a reality. For example, in the automotive product domain different sites charge different amounts for information such as invoice prices, and some sites are free, but offer less timely and less precise information.

In summary, we are excited by the BIG project. The integration of different AI systems in BIG is leveraging our technologies and providing us with new and fertile research ground while addressing the information explosion, a very real and important task.

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1/26/1998

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## About this document ...

**BIG: A Resource-Bounded Information Gathering Agent** 

This document was generated using the [LaTeX<sub>2</sub>HTML](#) translator Version 97.1 (release) (July 13th, 1997)

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The command line arguments were:

`latex2html -local_icons big.`

The translation was initiated by Thomas A. Wagner on 1/26/1998

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*Thomas A. Wagner*  
1/26/1998



**ATTACHMENT TO AND MODIFICATION OF**  
**NOTICE OF ALLOWABILITY (PTO-37)**  
*(November, 2000)*

**NO EXTENSIONS OF TIME ARE PERMITTED TO FILE CORRECTED OR FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION**, notwithstanding any indication to the contrary in the attached Notice of Allowability (PTO-37).

If the following language appears on the attached Notice of Allowability, the portion lined through below is of no force and effect and is to be ignored<sup>1</sup>:

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS FROM THE "DATE MAILED"** of this Office action. Failure to comply will result in ABANDONMENT of this application. ~~Extensions of time may be obtained under the provisions of 37 CFR 1.136(a)~~


Similar language appearing in any attachments to the Notice of Allowability, such as in an Examiner's Amendment/Comment or in a Notice of Draftperson's Patent Drawing Review, PTO-948, is also to be ignored.

---

<sup>1</sup> The language which is crossed out is contrary to amended 37 CFR 1.85(c) and 1.136. See "Changes to Implement the Patent Business Goals", 65 Fed. Reg. 54603, 54629, 54641, 54670, 54674 (September 8, 2000), 1238 Off. Gaz. Pat. Office 77, 99, 110, 135, 139 (September 19, 2000)

# Interview Summary

Application No. <b>09/323,598</b>	Applicant(s) <b>INALA ET AL</b>
Examiner <b>Joseph Feild</b>	Group Art Unit <b>2176</b>



All participants (applicant, applicant's representative, PTO personnel):

- (1) Joseph Feild (3) \_\_\_\_\_  
(2) Don Boys (4) \_\_\_\_\_

Date of Interview Nov 20, 2000

Type:  Telephonic  Personal (copy is given to  applicant  applicant's representative).

Exhibit shown or demonstration conducted:  Yes  No. If yes, brief description:

Agreement  was reached.  was not reached.

Claim(s) discussed: 1 and 7

Identification of prior art discussed:  
All of record

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:  
See attached Examiner's Amendment

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1.  It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2.  Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.

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024739 WM02/1121  
CENTRAL COAST PATENT AGENCY  
PO BOX 187  
AROMAS CA 95004

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/329,598	06/01/99	012	FEILD, J 2176	11/21/00
First Named Applicant	INALA,		35 USC 154(b) term ext. =	0 Days.

TITLE OF INVENTION SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 P3902	707-501.000	V35	UTILITY	YES	\$620.00	02/21/01

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE 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.**

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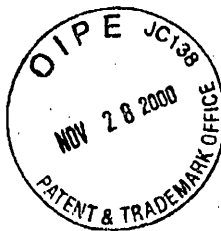
PTOL-85 (REV. 10-86) Approved for use through 08/30/99. (0851-0033)

11.30.00

B  
#9

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit: 2176 Examiner: J. Feild



"Express Mail" Mailing Label Number: EL573446486US  
In Re: Suman Kumar Inala et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/1999  
Subject: Server-Side Web Summary Generation and Presentation

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Dear Sir,

LETTER TO THE OFFICIAL DRAFTSPERSON

Submitted herewith are 6 sheets of formal drawings for the above-referenced case with changes made to comply with the PTO-948 form sent with Paper # 3 and the Examiner's requirements in Notice of Allowability mailed 11/21/2000. Applicant respectfully requests that the drawings be entered and matched with the case file for issue.

Respectfully Submitted,

Suman Kumar Inala et al.

by

Donald R. Boys  
Reg. No. 35,074

Donald R. Boys  
Central Coast Patent Agency  
P.O. Box 187  
Aromas, CA 95004  
(831) 726-1457

11/00

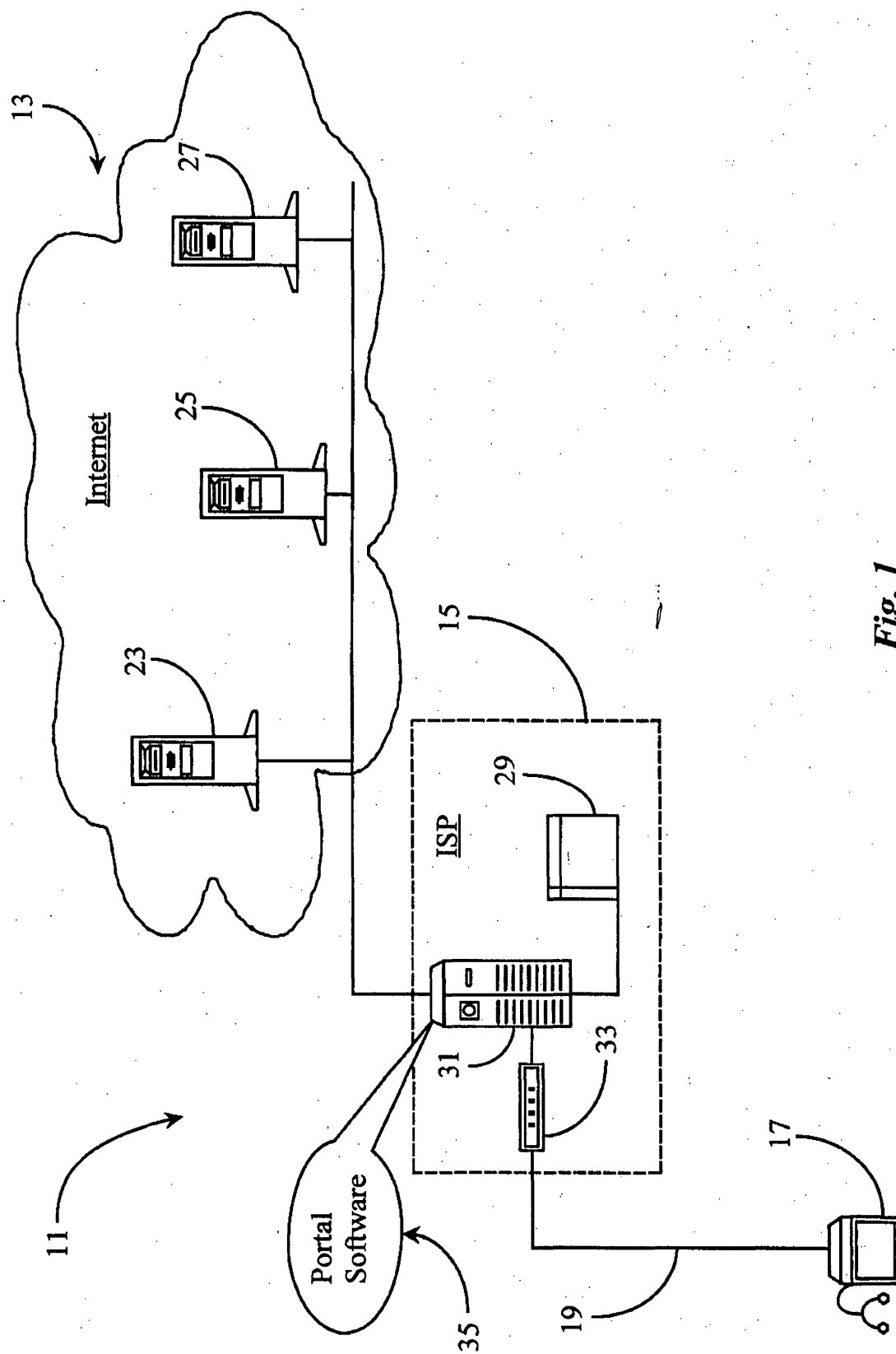


Fig. 1

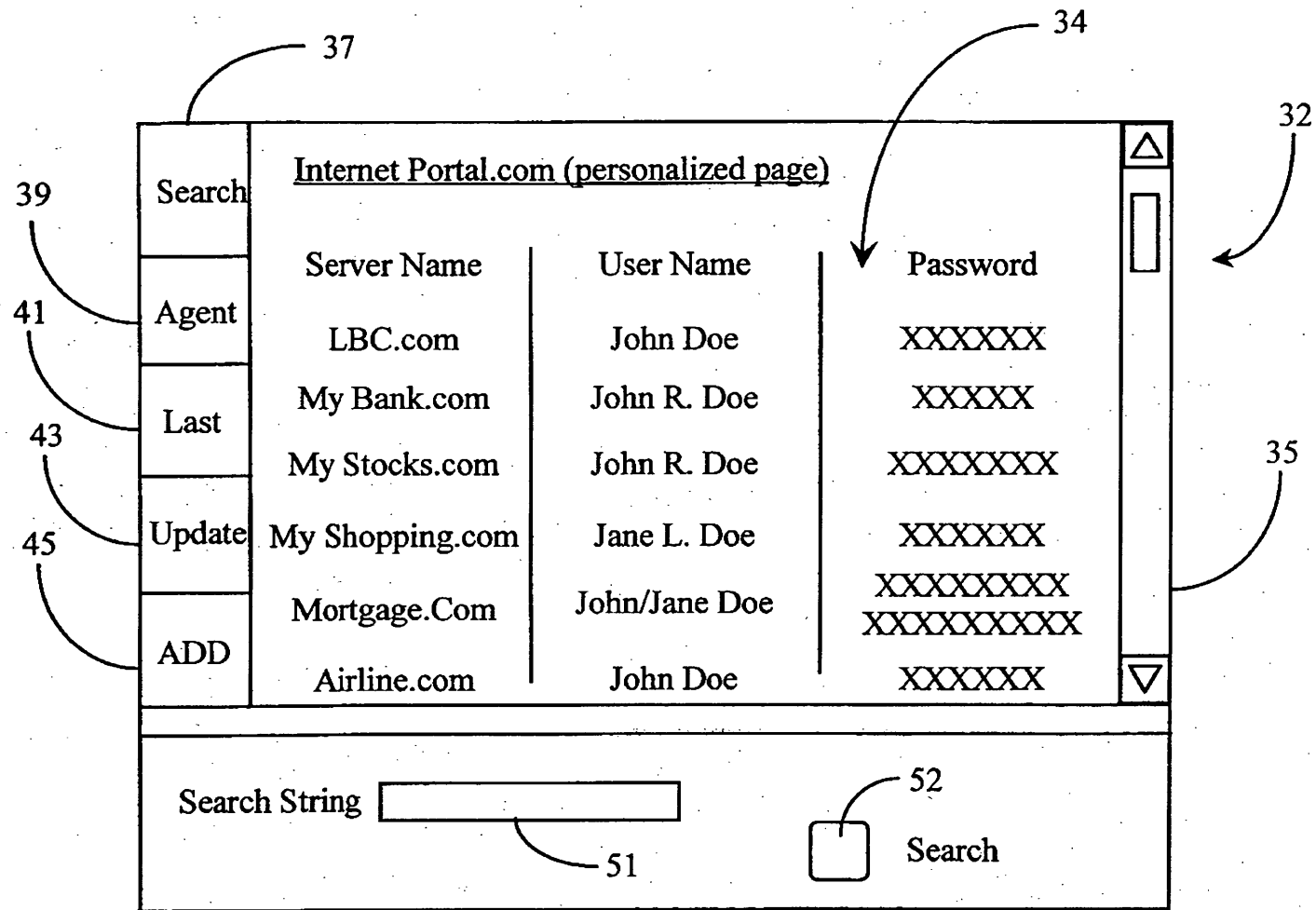
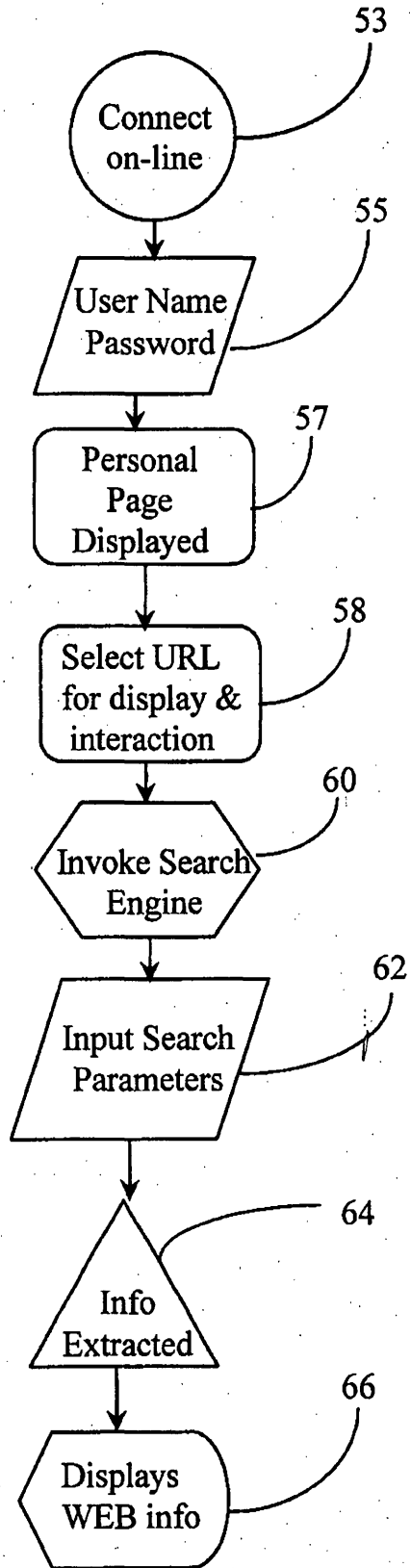
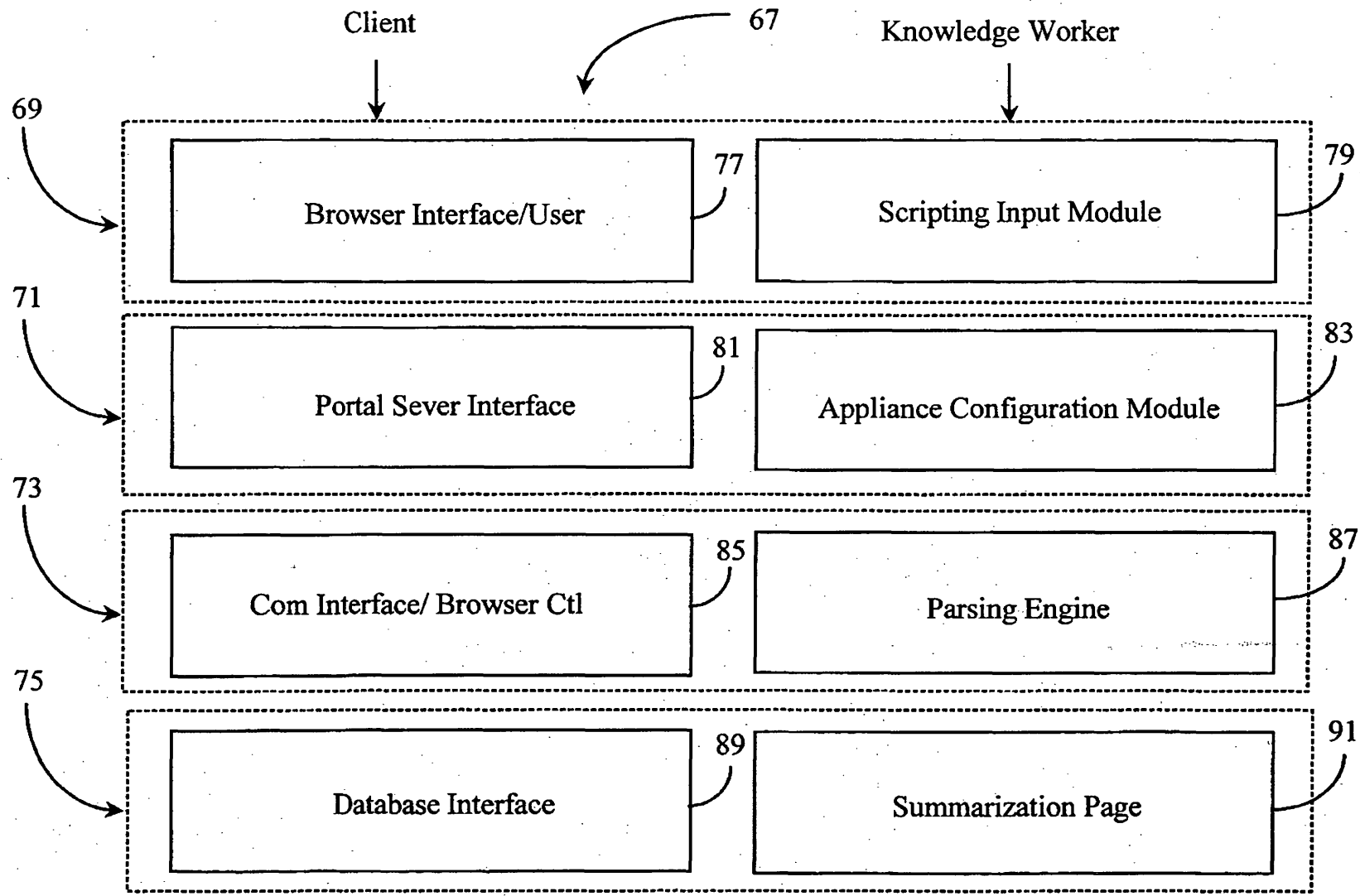


Fig. 2

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**Fig. 3**



**Fig. 4**



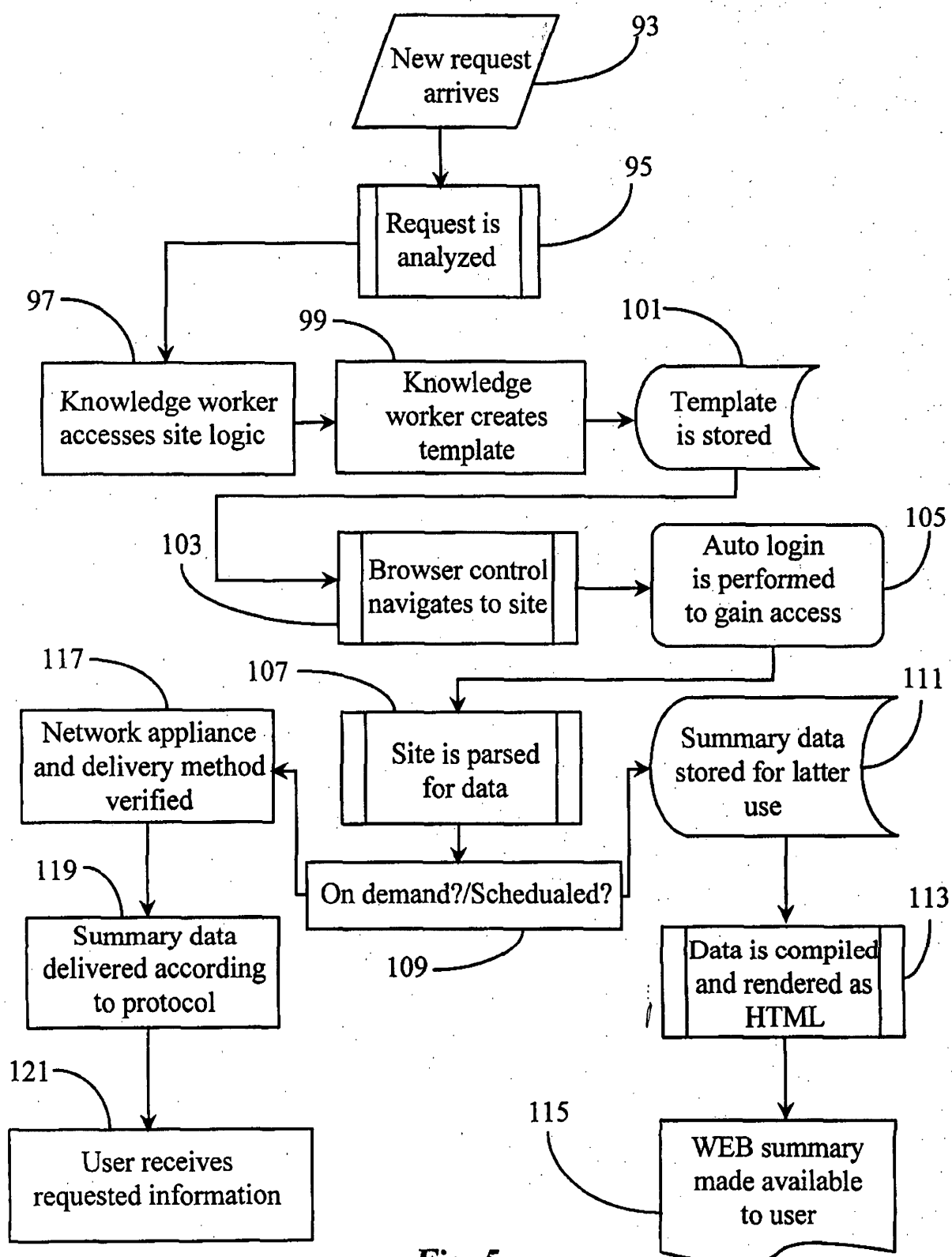


Fig. 5

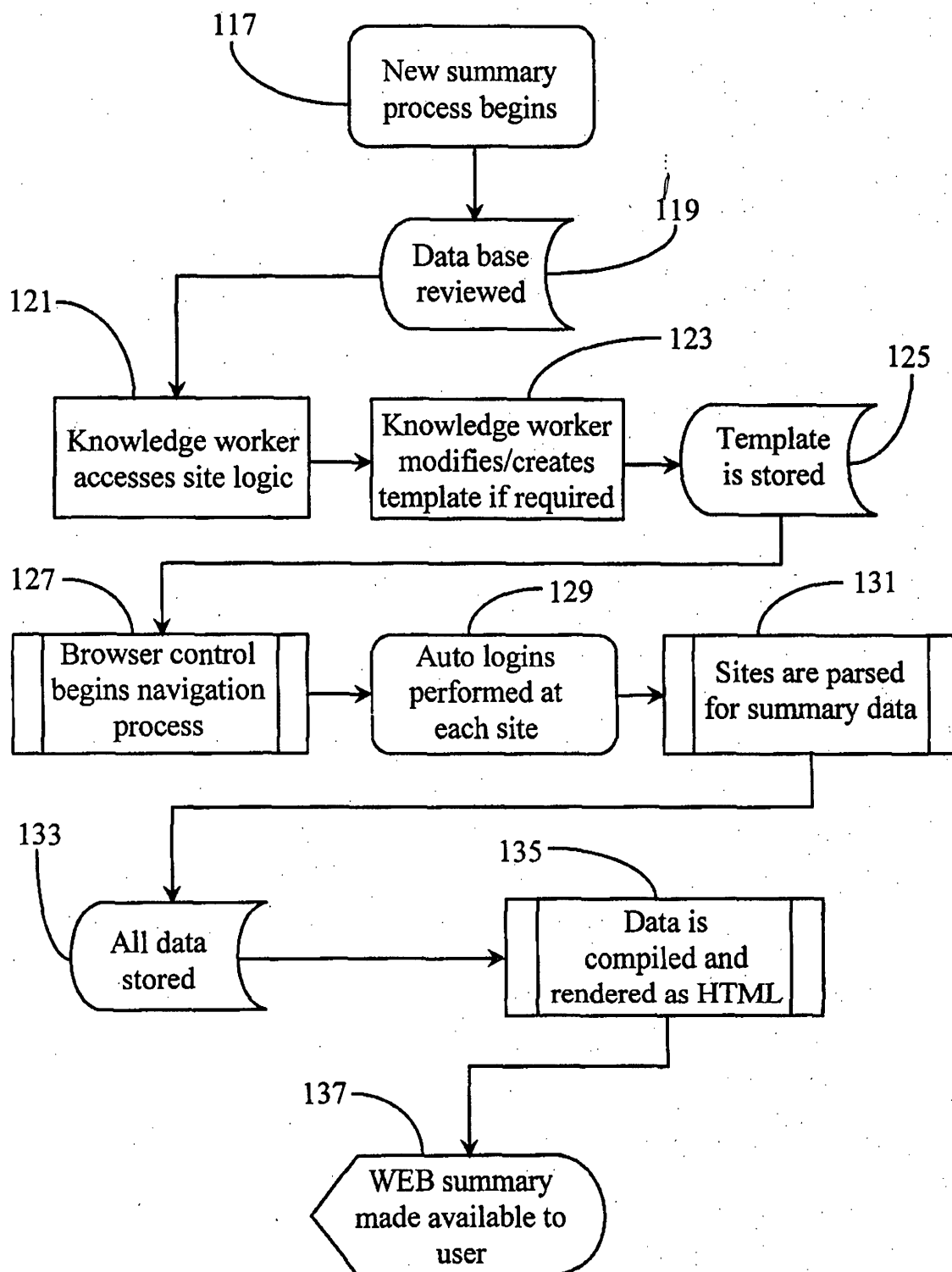


Fig. 6

## Certificate of Express Mailing

"Express Mail" Mailing Label Number: EL573446472US  
Date of Deposit: 11/28/2000  
Ref: Case Docket No.: P3902  
First Named Inventor: Suman Kumar Inala et al.  
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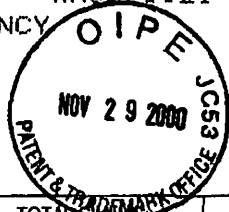
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PO BOX 187  
AROMAS CA 95004

WM02/1121



MARK A. BOYS (Depositor's name)  
Mark A. Boys (Signature)  
11/28/00 (Date)

APPLICATION NO.	FILING DATE	TOTAL	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/323,598	06/01/99	012	FEILD, J 2176	11/21/00
First Named Applicant: INALA,		35 USC 154(b) term ext. = 0 Days.		

TITLE OF INVENTION: SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 P3902	707-501.000	V35	UTILITY	YES	\$620.00	02/21/01

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.

- 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) attached.

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 Donald R. Boys
- 2 Central Coast
- 3 Patent Agency

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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the PTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Yodlee.com, Inc.  
(B) RESIDENCE: (CITY & STATE OR COUNTRY) Sunnyvale, CA

Please check the appropriate assignee category indicated below (will not be printed on the patent)  
 Individual  corporation or other private group entity  government

4a. The following fees are enclosed (make check payable to Commissioner of Patents and Trademarks):

- Issue Fee
- Advance Order - # of Copies 10

4b. The following fees or deficiency in these fees should be charged to:

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The COMMISSIONER OF PATENTS AND TRADEMARKS IS requested to apply the Issue Fee to the application identified above.

(Authorized Signature) [Signature] (Date) 11/28/00

NOTE: The Issue Fee 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 Patent and Trademark Office.

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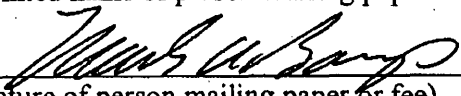
"Express Mail" Mailing Label Number: EL573445596US  
Date of Deposit: 03/20/2001  
Ref: Case Docket No.: P3902  
First Named Inventor: Suman Kumar Inala et al.  
Serial Number: 09/323,598 Patent No. 6,199,077 B1  
Filing Date: 06/01/1999  
Title of Case: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner of Patents and Trademarks, Washington D.C. 20231

1. Petition Under 1.322 or 1.324.
2. Certificate of Correction.
3. Copy of petition to correct inventorship sent 12/14/1999 w/ attachments A-I.
4. Certificate of express mailing.
5. Postcard listing contents.

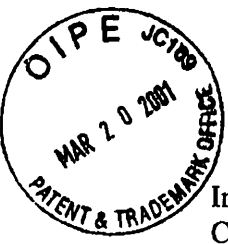
Mark A. Boys

(Typed or printed name of person mailing paper or fee)

  
\_\_\_\_\_  
(Signature of person mailing paper or fee)

03-22-01

6199077 DAC #11



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Art Unit: 2176 Examiner: J Feild

In Re: Suman Kumar Inala et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/1999  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users

**REVIEW**

**CERTIFICATE  
MAR 28 2001  
OF CORRECTION**

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

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**PETITION UNDER 37 CFR 1.322 or 1.324**

Dear Sirs:

It has come to our attention that in the published patent #6,199,077 the inventor section does not list the correct inventors. A petition to correct inventorship was filed in the USPTO on 12/14/1999 as is evidenced by the copies of said correspondence, returned postcard and a printout from the PAIR system indication receipt of mailing on 12/16/1999. It appears that the USPTO failed to implement the change of inventorship. We therefore request a certificate of correction be issued reflecting the correct inventorship as indicated on the PTO/SB/44 included herewith. If the instant petition under 37 CFR 1.322 is denied, we hereby request the petition be re-submitted under 1.324 "Correction of Inventorship in Patent". Applicant believes that the Petition to Correct Inventorship under 1.48, filed previously on 12/14/1999, satisfies all the requirements of a 1.324 submission. Any fees required are hereby authorized to be deducted from deposit account No. 500534.

**APPROVED**

**MAR 23 2002**

FOR THE DIRECTOR OF USPTO

Respectfully submitted by

Donald R. Boys Reg. No. 35,074

CCPA, Inc.  
P.O. Box 187  
Aromas, Ca. 95004  
(831)726-1457

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(Also Form PTO-1050)

### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,199,077

DATED : 03/06/2001

INVENTOR(S) : Suman Kumar Inala et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

"Inventor" now reads: Suman Kumar Inala, Santa Clara;  
P Venkat Rangan, San Diego;  
Ramakrishna Satyavolu, Santa Clara,  
all of CA (US)

"Inventor" should read: Suman Kumar Inala, Santa Clara;  
P Venkat Rangan, San Diego;  
Ramakrishna Satyavolu, Santa Clara,  
Sreeranga Prasannakumar Rajan, Santa Clara  
all of CA (US)

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MAILING ADDRESS OF SENDER: Central Coast Patent Agency  
P.O. Box 187  
Aromas, CA. 95004

PATENT NO. \_\_\_\_\_

No. of additional copies

By Donald R. Boys - Attorney of Record - Reg. No. 35,074 \_\_\_\_\_ →

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(Also Form PTO-1050)

### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO : 6,199,077 **BI**  
DATED : 03/06/2001  
INVENTOR(S) : Suman Kumar Inala et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

*Title Page Item [75]*

"Inventor" now reads: Suman Kumar Inala, Santa Clara;  
P Venkat Rangan, San Diego; *C*  
Ramakrishna Satyavolu, Santa Clara,  
all of CA (US)

"Inventor" should read: Suman Kumar Inala, Santa Clara; *C*  
P Venkat Rangan, San Diego;  
Ramakrishna Satyavolu, Santa Clara,  
Sreeranga Prasannakumar Rajan, Santa Clara  
all of CA (US)

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PATENT NO. \_\_\_\_\_

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By Donald R. Boys - Attorney of Record - Reg. No. 35,074 \_\_\_\_\_ 

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Ref: The patent application of: Suman Kumar Inala, et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/99  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**PETITION UNDER 37 CFR § 1.48 TO CORRECT INVENTORSHIP**

DEAR SIR:

Applicants Suman Kumar Inala, Venkat P. Rangan, and Ramakrishna Satyavolu, because of the facts set forth below, hereby petition the Commissioner to add Sreeranga Prasannakumar Rajan to the above referenced Application as well as any Divisional, Continuation or Continuation-in-part Applications which may be filed that are based on the present Application.

Accompanying this Petition is a Verified Statement of Facts and Declaration signed by the actual inventors, the written consent of Yodlee.com Inc., the assignee of the entire interest in the above referenced Application, a power of attorney signed by each of the original and added inventors and a check in the amount of \$130.00 for petition fee as required by 37 CFR § 1.17(h).

The application for patent was made through error and without any deceptive intention, in applicant's names only, as will be apparent from the Verified Statement of Facts attached hereto.

Respectfully submitted, Suman Kumar Inala, et al.

By:

A handwritten signature in black ink, appearing to read "Donald R. Boys".

Donald R. Boys, Reg. No.: 35,074

CCPA  
P.O. Box 187  
Aromas, CA. 95004  
Phone: (831) 726-1457  
Fax: (831) 726-3475

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B



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Ref: The patent application of: Suman Kumar Inala, et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/99  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

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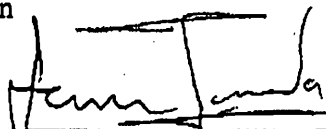
VERIFIED STATEMENT OF FACTS AND DECLARATION IN  
SUPPORT OF PETITION UNDER 37 CFR § 1.48 (a)(1) TO CORRECT  
INVENTORSHIP

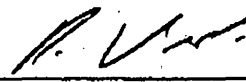
DEAR SIR:


1. We, Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan are employees of Yoqlee.com, Inc., of Sunnyvale, CA.
2. Donald R. Boys Reg. No. 35,074, is the agent appointed by Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan to prosecute the above referenced Patent application and transact all business in the Patent and Trademark Office connected therewith.
6. Donald R Boys discovered on 08/02/99, through an error in docketing, that the above referenced Application naming Suman Kumar Inala, Venkat P. Rangan, and Ramakrishna Satyavolu, as co-inventors was mistakenly filed without adding the name of Sreeranga Prasannakumar Rajan.
7. Together as co-workers Suman Kumar Inala, Venkat P. Rangan, Ramakrishna Satyavolu, and Sreeranga Prasannakumar Rajan worked on the project that led to the conception and reduction to practice of the present invention.
8. The omission of Sreeranga Prasannakumar Rajan as co-inventor on the present application was made through error as described above, and without

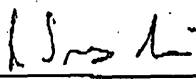
any deceptive intent.

9. All statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statement may jepordize the validity the application or any patent issuing thereon

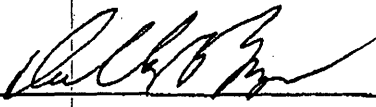
By:  Date: 12 Dec 99, 1999  
~~Suman Kumar Inala~~

By:  Date: 12/12, 1999  
Venkat P. Rangan

By:  Date: 12/12, 1999  
Ramakrishna Satyavolu

By:  Date: 12/12, 1999  
Sreeranga Prasannakumar Rajan

Respectfully submitted, Suman Kumar Inala, et al.

By: 

Donald R. Boys, Reg. No.: 35,074

Central Coast Patent Agency  
P.O. Box 187  
Aromas, CA. 95004  
Phone: (831) 726-1457  
Fax: (831) 726-3475

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Ref: The patent application of: Suman Kumar Inala, et al.  
Case: P3902  
Serial No.: 09/323,598  
Filed: 06/01/99  
Subject: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

To: The Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**WRITTEN CONSENT IN SUPPORT OF PETITION  
UNDER 37 CFR §1.48 (a)(4) TO CORRECT INVENTORSHIP**

DEAR SIR:

Pursuant to the requirements of 37 CFR §1.48 (a)(4), Yodlee.com Inc., of Sunnyvale, CA, the assignee of the entire interest of the above referenced U.S. Patent Application, hereby consents to the Petition to Correct Inventorship to add the name of Sreeranga Prasannakumar Rajan as co-inventor to the above-referenced patent application.

Yodlee.com Inc.

P. Venkat Rangan - President and CEO

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MAR 25 2001  
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D

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**  
**ATTORNEY DOCKET NO. P3902**



I, a below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.

the specification of which (check one)  is attached hereto.  
 was filed on: 06/01/1999  
 Application Serial No. 09/323,598  
 and was amended on \_\_\_\_\_  
 (If applicable)

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, s 1.56 (a). In the case that the present application is a continuation-in-part application, I further acknowledge the duty to disclose material information as defined in 37 CFR s 1.56(a) which became available between the filing date of the prior application and the filing date of the present application. I hereby claim foreign priority benefits under Title 35, United States Code s119 of any foreign applications for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)	(Number)	(Country)	(Day/Month/Year Filed)
	(Number)	(Country)	(Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code, s120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, s112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, s156(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.): 09/208,740 (Filing Date): 12/8/98 (Status): pending  
 (Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
 (Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_  
 (Application Serial No.): \_\_\_\_\_ (Filing Date): \_\_\_\_\_ (Status): \_\_\_\_\_


POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.  
 (List name and registration number)

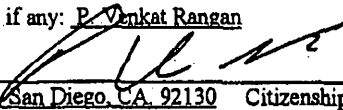
Name: Donald R. Boys Reg. No. 35,074

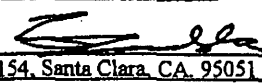
SEND CORRESPONDENCE TO:  
 Donald R. Boys  
 P.O. Box 187  
 Aromas, CA 95004

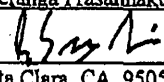
DIRECT TELEPHONE CALLS TO:  
 Donald R. Boys (831) 726-1457

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.

Full name of sole or first inventor: Suman Kumar Inala  
1st inventor's signature:  Dated: 12/12/99  
Residence: 3707 Poincianna Dr., Apt. 154, Santa Clara, CA 95051 Citizenship: US  
Post Office Address: Same

Full name of 2nd joint inventor, if any: P. Venkat Rangan  
2nd inventor's signature:  Dated: 12/12/99  
Residence: 13011 Callcott Way, San Diego, CA 92130 Citizenship: US  
Post Office Address: Same

Full name of 3rd joint inventor, if any: Ramakrishna Satyavolu  
3rd inventor's signature:  Dated: 12/12/99  
Residence: 3707 Poincianna Dr., Apt. 154, Santa Clara, CA 95051 Citizenship: India  
Post Office Address: Same

Full name of 4th joint inventor, if any: Sreeranga Prasannakumar Rajan  
4th inventor's signature:  Dated: 12/12/99  
Residence: 3475 Granada Ave., #320, Santa Clara, CA 95051 Citizenship: US  
Post Office Address: Same

Full name of 5th joint inventor, if any:  
5th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 6th joint inventor, if any:  
6th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 7th joint inventor, if any:  
7th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Full name of 8th joint inventor, if any:  
8th inventor's signature: \_\_\_\_\_ Dated: \_\_\_\_\_  
Residence: \_\_\_\_\_ Citizenship: \_\_\_\_\_  
Post Office Address: \_\_\_\_\_

Declaration and Power of Attorney- Page 2

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AROMAS, CA 95004

**COAST COMMERCIAL BANK**  
WATSONVILLE, CALIFORNIA 95076  
90-3909-1211

12/14/99

1823

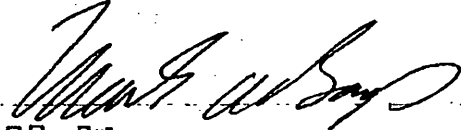
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One Hundred Thirty and 00/100\*\*\*\*\*

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MEMO Pet to correct invshp 09/323,598 EJ745196765US



⑈001823⑈ ⑆121139096⑆ 05⑈00399⑈7⑈

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Certificate of express mailing No. **EJ745196765US**  
Attorney Docket No: **P3902** Serial No. **09/323,598** Date: 12/14/1999

1. Petition to correct inventorship under 37 CFR §1.48(a).
2. Verified statement of facts in support of petition.
3. Written Consent in Support of Petition under 37 CFR § 1.48(a)(4).
4. Signed Declaration and Power of Attorney.
5. Check for fees in the amount of 130.00.
6. Certificate of express mailing.
7. Postcard listing contents.

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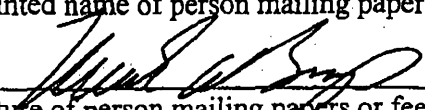
"Express Mail" Mailing Label Number: **EJ745196765US**  
Date of Deposit: **12/14/1999**  
Ref: Case Docket No.: **P3902**  
First Named Inventor: **Inala, Suman Kumar, et al.**  
Serial Number: **09/323,598**  
Filing Date: **06/01/1999**  
Title of Case: **Method and Apparatus for Obtaining and Presenting WEB Summaries to Users.**

I hereby certify that the attached papers are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and addressed to the Commissioner of Patents and Trademarks, Washington D.C. 20231

1. Petition to correct inventorship under 37 CFR §1.48(a).
2. Verified statement of facts in support of petition.
3. Written Consent in Support of Petition under 37 CFR § 1.48(a)(4).
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5. Check for fees in the amount of 130.00.
6. Certificate of express mailing.
7. Postcard listing contents.

Mark A. Boys

(Typed or printed name of person mailing paper or fee)

  
(Signature of person mailing papers or fee)







H

3902

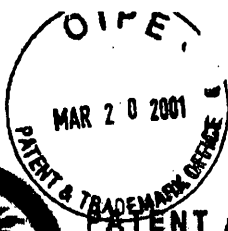
Certificate of express mailing No. **EJ745196765US**  
Attorney Docket No: **P3902** Serial No. **09/323,598** Date: 12/14/1999

1. Petition to correct inventorship under 37 CFR §1.48(a).
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3. Written Consent in Support of Petition under 37 CFR § 1.48(a)(4).
4. Signed Declaration and Power of Attorney.
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Search results for application number: 09/323,598

Application Filing Date:	06-01-1999	Class / Sub-Class:	707/501,000
Issue Date of Patent:	03-06-2001	Location:	FILE REPOSIT 924-9309
Examiner Name:	FEILD, JOSEPH H	Status:	PATENTED FIL
Group Art Unit:	2176	Attorney Docket Number:	P3902
Earliest Publication No:		Patent Number:	6,199,077
Earliest Publication Date:		Customer Number:	24739

File Contents History

Number	Date	Contents Description
22	03-06-2001	PATENT GRANT MAILED
21	02-15-2001	WEEKLY PATENT ISSUE RECEIPT
20	01-09-2001	POTENTIAL ISSUE READY
19	11-29-2000	BASE ISSUE FEE PAYMENT
18	12-12-2000	DRAWING REQUIREMENTS SATISFIED
17	11-21-2000	NOTICE OF ALLOWANCE PRINT
16	11-20-2000	COUNT DATE-NOTICE OF ALLOWANCE
15	11-20-2000	EXAMINER INTERVIEW SUMMARY RECORD
14	10-06-2000	DATE CASE WAS DOCKETED
13	09-07-2000	DATE FORWARDED TO EXAMINER
12	09-05-2000	RESPONSE AFTER NON-FINAL ACTION
11	08-28-2000	DATE CASE WAS DOCKETED
10	07-19-2000	MAIL DATE OF OFFICE ACTION
9	07-17-2000	COUNT DATE-NON-FINAL ACTION
8	07-11-2000	DATE CASE WAS DOCKETED
7	12-16-1999	CONVERSION UNDER RULE 45
6	09-02-1999	DATE CASE WAS DOCKETED
5	07-12-1999	TRANSFER INQUIRY
4	07-06-1999	TRANSFER INQUIRY

4	07-08-1999	TRANSFER INQUIRY
3	06-28-1999	APPLICATION DISPATCHED FROM PRE EXAM
2	06-23-1999	APPLICATION SCANNED
1	06-09-1999	INITIAL EXAM TEAM XX

REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)

Handwritten: H-10, 2/26/01

Received  
APR 26 2001  
Technology Center 2100

In re Application of Inala et al	
Application Number <del>09/323,598</del> 09/323,598	Filed 12/8/98
Group Art Unit 2776	Examiner Joseph H. Feild

Paper No. 7

Assistant Commissioner for Patents  
Washington, DC 20231

I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

- (A) referred to in United States Patent Number 6,199,077, column \_\_\_\_\_.
- (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, on page \_\_\_\_\_ of paper number \_\_\_\_\_.
- (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_, or
- (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

Please direct any correspondence concerning this request to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Steve D. Day*

Signature  
*Steve D. Day*

Typed or printed name

4/23/01

Date

FOR PTO USE ONLY

Approved by: \_\_\_\_\_  
(Initials)

Unit: \_\_\_\_\_

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

NOTICE RE: CERTIFICATES OF CORRECTION

DATE : 10/24/2002

Paper No.: 12

TO : Supervisor, Art Unit 2176

SUBJECT : Certificate of Correction Request in Patent No.: 6199077

A response to the following question is requested with respect to the accompanying request for a certificate of correction.

With respect to the change(s) requested, correcting Office and/or Applicant's errors, should the patent read as shown in the certificate of correction? No new matter should be introduced, nor should the scope or meaning of the claims be changed.

*SHOULD THE PETITION TO CORRECT INVENTORSHIP UNDER RULE 148 been granted that was filed December 16, 1999?*

PLEASE COMPLETE THIS FORM AND RETURN WITH FILE, WITHIN 7 DAYS, TO CERTIFICATES OF CORRECTION BRANCH - PK 3-915/922 PALM LOCATION 7580 - TEL. NO. 305-8309

*Antonio Johnson*

THANK YOU FOR YOUR ASSISTANCE!

Note your decision by placing a check mark in the appropriate box below, indicating whether all changes requested in the Request for Certificate of Correction should be applied. Please specify which changes should not be applied and indicate the reason(s) for denial, in the "Comments" section below.

YES       NO

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Heather Haas*  
\_\_\_\_\_  
Supervisor

2176  
\_\_\_\_\_  
Art Unit

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,199,077 B1  
DATED : March 6, 2001  
INVENTOR(S) : Suman Kumar Inala et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

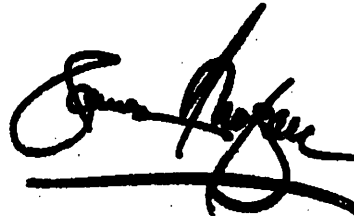
Title page.

Item [75], Inventor, now reads: "**Suman Kumar Inala, Santa Clara;  
P Venkat Rangan, San Diego;  
Ramakrishna Satyavolu, Santa Clara,  
all of CA (US)**"

should read: -- **Suman Kumar Inala, Santa Clara;  
P Venkat Rangan, San Diego;  
Ramakrishna Satyavolu, Santa Clara,  
Sreeranga Prasannakumar Rajan, Santa Clara  
all of CA (US)** --

Signed and Sealed this

Eighteenth Day of February, 2003



JAMES E. ROGAN  
*Director of the United States Patent and Trademark Office*

CHECKLIST FOR PROCESSING NEW APPLICATIONS

SERIAL NUMBER 09323598

revised 6/29/95

INSTRUCTIONS:

1. Make a checkmark beside each item IF verified.
2. If corrections are required, write notes to the examiner or supervisor on reverse side.

1. FACE OF THE FILE

1. Printed and stamped serial numbers match the bar code label.
2. Filing Date present.
3. Class/Subclass present.
4. Applicant(s) name present.
5. Total number of drawings present.
6. Total number of claims present.
7. Total number of independent claims present.
8. Filing fee received present.
9. Mailing address present.
10. Title of invention present.

2. CENTER OF THE FILE

A. DRAWINGS

1. None (go to B)
2. Serial Number present and correct on each sheet.
3. Number of sheets entered on line 1 of contents.

B. SMALL ENTITY STATEMENT

1. None and not recorded on face of file (go to C)
2. Statement present.
3. Small Entity recorded on face of file.

C. DECLARATION OR OATH

1. Title matches face of file and specification.
2. Declaration phrase present. (I hereby declare all...)
3. (Original and first inventor or inventors...) phrase present.
4. (Reviewed and understand the contents of the application, including claims...) phrase present.
5. (Acknowledge duty to disclose information in accordance with 1.56(a)...) phrase present.
6. Residence, citizenship, post office address of all applicants present.
7. Signed by all applicants.
8. Less than 3 months before filing date, or less than six months after filing date.

D. CLAIMS (as filed)

1. Complete form 1360 and 875: (forms on right side of file)
2. Circle independent claims on the Index of Claims.
3. Draw line under the last claim number on the Index of Claims.

E. SPECIFICATION

1. Serial Number present and correct.
2. Specification in permanent ink.
3. Brief Description of each drawing figure.
4. No missing or duplicate pages.
5. No holes punched in text.

F. ABSTRACT

1. None (go to G)
2. Serial Number present and correct.
3. Abstract on separate page.
4. 25 lines or less.
5. One paragraph ONLY.

G. PTO-1556

1. Present

H. PRE-AMENDMENTS (found on right side of file)

1. None (go to I)
2. Enter on Contents of filewrapper.
3. Instruction to cancel claims.
4. Claims canceled on Index of Claims.
5. Instruction to add claims.
6. Circle new independent claims on the Index of Claims.
7. Draw line under the new last claim number on Index of Claims.
8. Complete forms 1360 and 875.

I. PTO-948

1. Present

3. RIGHT SIDE OF FILE

1. PALM File Data sheet present.
2. Transmittal letters present.
3. Forms 1360 & 875 present/complete.
4. Miscellaneous Papers present/entered.
5. Petition to Make Special present. (Enter and place in the center)
6. Drawing prints present. (2 copies)



**FEES**

- 1. Correct filing fee paid.
- 2. Excess claims fees paid:
  - a. Excess total claims more than 20.
  - b. Excess independent claims more than 3.
  - c. First multiple dependent claim fee paid.
- 3. Miscellaneous paper fee paid.

**FINAL STEPS**

- 1. Sign and date center of filewrapper, under flap.
- 2. Docketed to examiner.

**NOTES TO SUPERVISOR:**

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**NOTES TO EXAMINER:**

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**SIGNATURE OF PREPARER:**

Scherman

**DATE:** 9-2 99

**PATENT APPLICATION FEE DETERMINATION RECORD**

Effective November 10, 1998

Application or Docket Number

09/323,598

**CLAIMS AS FILED - PART I**

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	12 minus 20= *	
INDEPENDENT CLAIMS	2 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT		

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

**CLAIMS AS AMENDED - PART II**

(Column 1) (Column 2) (Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus **
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

(Column 1) (Column 2) (Column 3)

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus **
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

(Column 1) (Column 2) (Column 3)

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus **
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			

\* 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.

SMALL ENTITY TYPE  OR

OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
	380.00			760.00
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL	380		TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=			X\$18=	
X39=			X78=	
+130=			+260=	
TOTAL ADDIT. FEE			TOTAL ADDIT. FEE	

**MULTIPLE DEPENDENT CLAIM  
FEE CALCULATION SHEET  
(FOR USE WITH FORM PTO-875)**

SERIAL NO.

09 323 398

FILING DATE

APPLICANT(S)

**CLAIMS**

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*		*		*	
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.	IND.	DEP.
1	1						51						
2		1					52						
3		1					53						
4		1					54						
5		1					55						
6		1					56						
7	1						57						
8		1					58						
9		1					59						
10		1					60						
11		1					61						
12		1					62						
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42							92						
43							93						
44							94						
45							95						
46							96						
47							97						
48							98						
49							99						
50							100						
TOTAL IND.	2						TOTAL IND.						
TOTAL DEP.	10						TOTAL DEP.						
TOTAL CLAIMS	12						TOTAL CLAIMS						

# MPI Family Report (Family Bibliographic and Legal Status)

In the MPI Family report, all publication stages are collapsed into a single record, based on identical application data. The bibliographic information displayed in the collapsed record is taken from the latest publication.

**Report Created Date:** 2011-03-30

**Name of Report:**

**Number of Families:** 1

**Comments:**

## Table of Contents

1. <b>US6199077B1</b> 20010306 YODLEE INC US Server-side web summary generation and presentation .....	62
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**Family1****130 records in the family, collapsed to 102 records.****AU1609401A 20010625**

[ no drawing available]

**(ENG) Method and apparatus for providing intelligent recommendations to users regarding online activities based on knowledge of data from a user's multiple web-services****Assignee:** YODLEE COM INC**Inventor(s):** RAJAN SREERANGA ; WU JONATHAN**Application No:** AU 1609401 D**Filing Date:** 20001113**Issue/Publication Date:** 20010625**Abstract:** NotAvailable**Priority Data:** US 0031307 20001113 W W; US 46151599 19991214 A;**IPC (International Class):** G06Q01000; G06Q04000; G06Q03000; H04L02908**ECLA (European Class):** G06Q03000C; H04L02908A7; H04L02908N21; H04L02908N29U**Legal Status:**

<b>Date</b>	<b>+/-</b>	<b>Code</b>	<b>Description</b>
20020815	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE

**AU1739600A 20000626****(ENG) Method and apparatus for providing and maintaining a user-interactive portal system accessible via internet****Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** RANGAN P VENKAT ; INALA SAM**Application No:** AU 1739600 D**Filing Date:** 19991118**Issue/Publication Date:** 20000626

**Abstract:** (ENG) An Internet Portal is enabled by software executing on an Internet-connected server. The Portal, in response to a log-on by a user, presents a secure and personalized page for and to the user, the personalized page having listed plural Internet destinations enabled by hyperlinks, wherein upon invocation of a hyperlink by the subscriber, such as by a point-and-click technique, the portal invokes a URL for the destination, and upon connection with the destination, transparently provides any required log-on information for user access at the destination. In an enhanced embodiment a search function is provided wherein a user may configure searches in any or all of the listed destinations on a personalized page. Provision is provided for log-on by limited appliances, such as by a Smartcard or embedded password, and in some embodiments functionality is provided in a browser plug-in wherein a user may navigate to a site, and, in response to a request for log-in data, the subscriber may use a hot key or pointer input, which will cause the browser to access and provide the needed data from the Password-All source.



**Priority Data:** US 20874098 19981208 A Y; US 9927533 19991118 W W N;

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F02100N5A2S

**Legal Status:**

Date	+/-	Code	Description
20010906	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE

**AU2002235515A1 20020724**

**(ENG) Method and apparatus for obtaining and aggregating off-line user data for re-packaging and presentation to users over a data-packet-network**

[ no drawing available]

**Assignee:** YODLEE INC

**Inventor(s):** SINGH SUKHINDER ; RAJAN SREERANGA  
PRASANNAKUMAR

**Application No:** AU 2002235515 A

**Filing Date:** 20020108

**Issue/Publication Date:** 20020724

**Abstract:** (ENG) A data access and aggregation server for accessing and aggregating off-line message data for requesting users is provided wherein access is performed from a server location point on a data-packet-network. The data access and aggregation server comprises, at least one communication port for bi-directional data communication between the server and users accessing the server from remote access nodes having access to the network, at least one communication port for bi-directional communication between a server and remote communications systems operating on a telephone network, at least one data port for data communication between the server and a connected data repository, a processor for storing server software and communication software and a software application for enabling automated dialing and interaction with the remote communications systems. The server responding to request from users dials destination numbers supplied by the users and upon connection therewith inputs any access codes required to trigger data playback whereupon the server records the played data and renders the data available to the requesting users. In some aspects the system also inputs access codes designed to trigger playback of message data at off-line systems.

**Priority Data:** US 75755301 20010109 A Y; US 0203066 20020108 W W N;

**IPC (International Class):** H04L02908; H04L02906; H04M003533

**ECLA (European Class):** H04L02908N1; H04L02906; H04L02908N27D; H04L02908N27F; H04M003533R

**Legal Status:**

Date	+/-	Code	Description
20040205	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE



**AU2002242080A8 20090730****(ENG) Interactive calculation and presentation of financial data results through a single interface on a data-packet-network****Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** PANDURANGAN SENTHIL KUMAR ; KUMAR SRIHARI ; DESAI SATYEN ; HAYWARD BLAKE EARL ; SCOTT JENNIFER GREENE ; KELLEY JOHN**Application No:** AU 2002242080 A**Filing Date:** 20020109**Issue/Publication Date:** 20090730

**Abstract:** (ENG) An interactive user-interface for ordering specific calculated and solution-oriented results related to finance is provided within a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The interactive user interface comprises, an interactive drop-down menu containing a plurality of questions, the questions relating to various aspects of financial planning, an interactive inputs section containing a plurality of input data fields and selection boxes, the inputs section for configuring a calculative order, a submission function for submitting the calculative order upon completion thereof and a results window for displaying the data results derived from the calculations ordered. A user operating within the user-interface selects an issue from the drop-down menu, populates any vacant data fields and or selection boxes displayed in the inputs section as a result of selecting an issue, and submits the data for server-side calculation and subsequent display of the calculated results.

**Priority Data:** US 75888001 20010110 A Y; US 0203114 20020109 W W N;**IPC (International Class):** G06Q01000**ECLA (European Class):** G06Q01000C**Legal Status:**

Date	+/-	Code	Description
20040205	()	MK6	



**AU2002247324A1 20021021****(ENG) Interactive financial portfolio tracking interface****Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** DESAI SATYEN ; KUMAR SRIHARI ; KELLEY  
JOHN ; SCOTT JENNIFER GREENE ;  
PANDURANGAN SENTHIL KUMAR ;  
HAYWARD BLAKE EARL**Application No:** AU 2002247324 A**Filing Date:** 20020313**Issue/Publication Date:** 20021021

**Abstract:** (ENG) A portfolio-tracking module having a displayable summary interfaces is provided within a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The portfolio-tracking module comprises, an interactive main interface accessible through the summary interface, the main interface for listing stocks and investment accounts for viewing, an interactive menu provided within the main interface for selecting views of individual investment accounts, the views appearing within the same or within a secondary interface, an interactive selection interface provided within the main interface for selecting investment accounts for data tracking, a first interactive hyperlink embedded within the main interface for linking the main interface to a secondary interface for viewing tracked information about personal investments and a second interactive hyperlink embedded within the main interface for linking the main interface to a secondary configuration interface for adding new investment accounts or stocks for tracking. A user working from within the module may interact with selected ones of interactive links for the purpose of invoking a variety of secondary interfaces containing more detailed information about registered investments, financial accounts, and performance data about stocks.

**Priority Data:** US 82661301 20010404 A Y; US 0207605 20020313 W W N;**IPC (International Class):** G06Q04000**ECLA (European Class):** G06Q04000C**Legal Status:**

Date	+/-	Code	Description
20040219	()	MK6	





**AU2002248682A1 20021008****(ENG) Turnkey system providing centralized data aggregation****Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** PUDHUKOTTAI SAMPATHKUMAR RANGA ;  
SATYAVOLU RAMAKRISHNA ;  
SANKURATRIPATI SUBHASH ; TSAI SIN-MEI**Application No:** AU 2002248682 A**Filing Date:** 20020322**Issue/Publication Date:** 20021008**Abstract:** NotAvailable**Priority Data:** US 0208860 20020322 W W; US 27850201 20010323 P;**IPC (International Class):** G06F01516**ECLA (European Class):** G06F01730B**Legal Status:**

Date	+/-	Code	Description
20040219	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE

**AU2002335512A1 20020904****(ENG) Interactive bill payment center****Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** PANDURANGAN SENTHIL KUMAR ;  
HAYWARD BLAKE EARL ; KELLEY JOHN ;  
KUMAR SRIHARI ; SCOTT JENNIFER GREEN  
; DESAI SATYEN**Application No:** AU 2002335512 A**Filing Date:** 20020212**Issue/Publication Date:** 20020904**Abstract:** NotAvailable**Priority Data:** US 0204095 20020212 W W; US 78592901 20010216 A;**IPC (International Class):** G06Q03000**ECLA (European Class):** G06Q03000B**Legal Status:**

Date	+/-	Code	Description
20040212	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE



**AU758865B2 20030403****(ENG) Server-side web summary generation and presentation****Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** INALA SUMAR KUMAR ; RANGAN P  
VENKAT ; SATYAVOLU RAMAKRISHNA ;  
RAJAN SREERANGA PRASANNAKUMAR**Application No:** AU 4359300 A**Filing Date:** 20000418**Issue/Publication Date:** 20030403

**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 32359899 19990601 A Y; US 0010411 20000418 W W N;**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9**Legal Status:**

Date	+/-	Code	Description
20030807	()	FGA	



**AU4359300A 20001218****(ENG) Server-side web summary generation and presentation****Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** INALA SUMAR KUMAR ; RANGAN P  
VENKAT ; SATYAVOLU RAMAKRISHNA ;  
RAJAN SREERANGA PRASANNAKUMAR**Application No:** AU 4359300 D**Filing Date:** 20000418**Issue/Publication Date:** 20001218

**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 32359899 19990601 A Y; US 0010411 20000418 W W N;**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9**Legal Status:**

Date	+/-	Code	Description
20030807	()	FGA	



**AU4574401A 20011030**

**(ENG) Method and apparatus for providing auto-registration and service access to internet sites for internet portal subscribers**

**Assignee:** YODLEE INC

[ no drawing available]

**Inventor(s):** RANGARAJAN ANAND ; LEE JI HOON ;  
INALA SUMAN KUMAR ; SATYAVOLU  
RAMAKRISHNA ; RAJAN SREERANGA P

**Application No:** AU 4574401 D

**Filing Date:** 20010314

**Issue/Publication Date:** 20011030

**Abstract:** (ENG) A method and apparatus is provided for populating and submitting electronic forms by proxy over a data-packet-network. The apparatus comprises a software application running on a system of network-connected servers that enables a user, connected in session with one of the servers, to navigate to a site containing an electronic form and obtain data about the site and about the form. The data obtained is used in conjunction with data about the user to construct a machine readable job order upon user request that may be executed for the purpose of automatic form population and submission to a host sponsoring the site. Upon acceptance of the submitted form, data used for passwords, log-in codes and user-names is returned to a data repository where it is entered along with specific site data as a new registered site item for a registering user such that future navigation to the site, auto log-in and data return may be performed automatically on behalf of the user.

**Priority Data:** US 55034800 20000414 A Y; US 0108265 20010314 W W N;

**IPC (International Class):** H04L02906; G06F01724; H04L02908

**ECLA (European Class):** H04L02906S8D; G06F01724F; H04L02906S8B; H04L02908A7; H04L02908N9;  
H04L02908N27A; H04L02908N29U; H04L02908N33

**Legal Status:** There is no Legal Status information available for this patent

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**AU4577401A 20011003**

**(ENG) Method and apparatus for retrieving information from semi-structured, web-based data sources**

**Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** RAJAN SREERANGA P ; PANDURANGAN SENTHIL KUMAR ; WU JONATHAN

**Application No:** AU 4577401 D

**Filing Date:** 20010315

**Issue/Publication Date:** 20011003

**Abstract:** NotAvailable

**Priority Data:** US 0108360 20010315 W W; US 53264700 20000322 A;

**IPC (International Class):** G06F01730

**ECLA (European Class):** G06F01730W1

**Legal Status:** There is no Legal Status information available for this patent

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**AU5755801A 20011126**

**(ENG) Network-based bookmark management and web-summary system**

**Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** WU JONATHAN ; RAJAN SREERANGAN P

**Application No:** AU 5755801 D

**Filing Date:** 20010507

**Issue/Publication Date:** 20011126

**Abstract:** NotAvailable

**Priority Data:** US 57549100 20000518 A X; US 0114730 20010507 W V;

**IPC (International Class):** G06F01730; G06F01724; G06F01516

**Legal Status:** There is no Legal Status information available for this patent

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**AU5918500A 20010213****(ENG) Networked architecture for enabling automated gathering of information from web servers****Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** SATYAVOLU RAMAKRISHNA ; INALA  
SUMAR KUMAR ; RANGAN P VENKAT**Application No:** AU 5918500 D**Filing Date:** 20000707**Issue/Publication Date:** 20010213**Abstract:** NotAvailable**Priority Data:** US 0018542 20000707 W V; US 36291499 19990727 A X;**IPC (International Class):** G06F00700; G06F01500; G06F01700; G06F01721; G06F01724; G06F01730**Legal Status:**

Date	+/-	Code	Description
20020502	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE

**AU6125501A 20011203****(ENG) Cobranding portal services and normalizing advertisements delivered****Assignee:** YODLEE COM INC

[ no drawing available]

**Inventor(s):** SANKURATRIPATI SUBHASH ; LEE JI HOON  
; SATYAVOLU RAMAKRISHNA**Application No:** AU 6125501 D**Filing Date:** 20010507**Issue/Publication Date:** 20011203**Abstract:** NotAvailable**Priority Data:** US 0114751 20010507 W W; US 57369700 20000519 A;**IPC (International Class):** G06F01730**ECLA (European Class):** G06F01730W1F; G06Q03000A**Legal Status:** There is no Legal Status information available for this patent

**AU7337100A 20010417**

**(ENG) Method and apparatus for restructuring of personalized data for transmission from a data network to connected and portable network appliances**

[ no drawing available]

**Assignee:** YODLEE COM INC

**Inventor(s):** DASWANI NEIL ; INALA SUMAN KUMAR ;  
SATYAVOLU RAMAKRISHNA ; RANGAN P  
VENKAT ; RAJAN SREERANGA P

**Application No:** AU 7337100 D

**Filing Date:** 20000829

**Issue/Publication Date:** 20010417

**Abstract:** NotAvailable

**Priority Data:** US 0023777 20000829 W W; US 39832099 19990916 A;

**IPC (International Class):** G06F01760

**ECLA (European Class):** G06F01730W9V; G06Q03000A

**Legal Status:**

Date	+/-	Code	Description
20020516	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE

**AU7704800A 20010508**

**(ENG) Method and apparatus for providing calculated and solution-oriented personalizedsummary-reports to a user through a single user-interface**

[ no drawing available]

**Assignee:** YODLEE COM INC

**Inventor(s):** RANGAN P VENKAT ; SHARMA MANOJ ;  
RAJAN SREERANGA P ; WU JONATHAN

**Application No:** AU 7704800 D

**Filing Date:** 20000919

**Issue/Publication Date:** 20010508

**Abstract:** NotAvailable

**Priority Data:** US 0025672 20000919 W V; US 42562699 19991022 A X;

**IPC (International Class):** G06F01500

**Legal Status:**

Date	+/-	Code	Description
20020620	(-)	MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE



**BR0011015A 20020219**

(POR) Portal internet, e, método para fornecer informações sumárias nos sites web (57) "portal internet, e, método para fornecer informações sumárias nos sites web". o servidor do portal inclui o agente de programa configurado para realizar buscas sumárias para os assinantes baseado nos destinos internet fornecidos pelos assinantes, para recuperar a informação de tais destinos baseado na informação do site pré-programado (107), e para baixar a informação sumária para o assinante (119, 115). os destinos e a natureza da informação de forma a serem recuperadas são pré-programadas. há também uma interface de configuração e inicialização para o assinante estabelecer e iniciar uma busca sumária. em alguns casos as buscas sumárias são configuradas para clientes individuais como gabaritos armazenados (101) e recuperados no servidor conectado à internet. também em alguns casos (109) a informação recuperada é imediatamente enviada para o assinante, e em outras situações tal informação é salva no portal para ser recuperada pelo assinante em último instante (111). nos modelos preferidos da invenção, as identificações automáticas são acompanhadas (105) por um assinante nos destinos internet pelo uso de uma informação de configuração pré-armazenada.

[ no drawing available]

Assignee: YODLEE INC US

Inventor(s): INALA SUMAN KUMAR ; RANGAN P  
VENKAT ; SATYAVOLU RAMAKRISHNA ;  
RAJAN SREERANGA

Application No: BR 0011015 A

Filing Date: 20000418

Issue/Publication Date: 20020219

**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

Priority Data: US 32359899 19990601 A Y; US 0010411 20000418 W W N;

IPC (International Class): G06F01300; G06F01200; G06F01500; G06F01730; H04L02908

ECLA (European Class): H04L02908N27I; G06F01730W1F; G06F01730W9

Legal Status:

Date	+/-	Code	Description
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20071211	(-)	B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW : REFERENTE A 4A, 5A, 6A E 7A ANUIDADES.;
20071211	()	B08F	: REFERENTE A 4A, 5A, 6A E 7A ANUIDADES.;

**CN1353838A 20020612****(ENG) Server-side WEB summary generation and presentation****Assignee:** YODLEE INC US

[ no drawing available]

**Inventor(s):** INALA SUMAR K US ; RANGAN P VENKAT US ; SATYAVOLU RAMAKRISHNA US**Application No:** CN 00808348 A**Filing Date:** 20000418**Issue/Publication Date:** 20020612

**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 32359899 19990601 A Y;**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9**Legal Status:**

Date	+/-	Code	Description
<del>20020519</del>	()	<del>C00</del>	



**EP1192558A4 20021120**  
**EP1192558A1 20020403**

**(ENG) SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION**

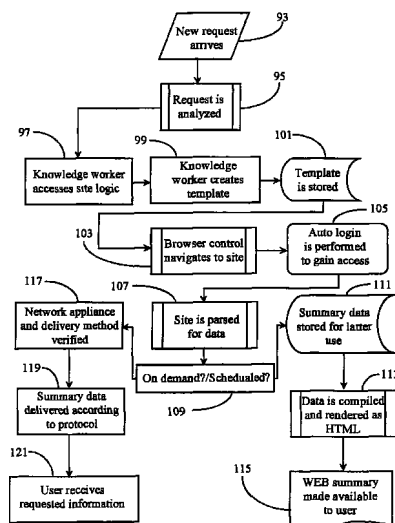
**Assignee:** YODLEE INC US

**Inventor(s):** INALA SUMAR KUMAR US ; RANGAN P VENKAT US ; SATYAVOLU RAMAKRISHNA US ; RAJAN SREERANGA PRASANNAKUMAR US

**Application No:** EP 00923475 A

**Filing Date:** 20000418

**Issue/Publication Date:** 20021120



**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 0010411 20000418 W W N; US 32359899 19990601 A Y;

**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9

**Designated Countries:**

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20020403	(+)	17P	REQUEST FOR EXAMINATION FILED Effective date: 20011206;
20020403	(+)	AK	DESIGNATED CONTRACTING STATES: Kind code of corresponding patent document: A1; List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE;
20020403	(+)	AX	EXTENSION OF THE EUROPEAN PATENT TO : AL;LT;LV;MK;RO;SI;
20020925	( )	RIN1	INVENTOR (CORRECTION) Inventor name: INALA, SUMAR KUMAR;
20020925	( )	RIN1	INVENTOR (CORRECTION) Inventor name: RANGAN, P. VENKAT;



20020925	( )	RIN1	INVENTOR (CORRECTION) Inventor name: SATYAVOLU, RAMAKRISHNA;
20020925	( )	RIN1	INVENTOR (CORRECTION) Inventor name: RAJAN, SREERANGA PRASANNAKUMAR;
20021120	(+)	A4	SUPPLEMENTARY SEARCH REPORT Effective date: 20021007;
20021120	(+)	AK	DESIGNATED CONTRACTING STATES: Kind code of corresponding patent document: A4; List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE;
20081128	( )	REG	Corresponding country code for PRS Code (EP REG): HK; Corresponding EP Code 1 for PRS Code (EP REG): WD; Corresponding patent document: 1044834; Country code of corresponding patent document: HK;

**EP1236084A1 20020904**

**(ENG) NETWORKED ARCHITECTURE FOR ENABLING AUTOMATED GATHERING OF INFORMATION FROM WEB SERVERS**

**Assignee:** YODLEE INC US

**Inventor(s):** SATYAVOLU RAMAKRISHNA US ; INALA SUMAN KUMAR US ; RANGAN P VENKAT US

**Application No:** EP 00945208 A

**Filing Date:** 20000707

**Issue/Publication Date:** 20020904

**Abstract:** (ENG) A data-gathering and reporting system for collecting WEB summaries from the Internet for individual subscribers to a Portal subscription system has a plurality of gatherer servers (137), each connected to the Internet (109), to an ascending hierarchy of work request distribution servers (135) and (136), and to a ascending hierarchy of collector servers (133). A work request generator at the top of the hierarchy of distribution servers gathers work requests for collecting WEB summaries, and a filer server (131) at the top of the hierarchy of collector servers writes data to an database (129). Work flow is by work requests generator down the hierarchy of distributor servers to the gatherer servers, where work requests are accomplished by gathering WEB summaries from Internet servers, and by data collected from the gatherer servers up the hierarchy to the filing server.

**Priority Data:** US 0018542 20000707 W W N; US 36291499 19990727 A Y;

**IPC (International Class):** G06F01300; G06F01730

**ECLA (European Class):** G06F01730W3

**Designated Countries:**

**Publication Language:** ENG

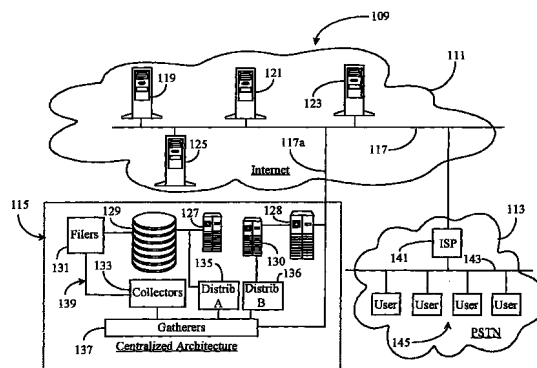
**Filing Language:** ENG

**Agent(s):** White, Duncan Rohan 00086304

Marks & Clerk 90 Long Acre London WC2E 9RA

**Legal Status:**

Date	+/-	Code	Description
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20020904	(+)	17P	REQUEST FOR EXAMINATION FILED Effective date: 20020213;
20020904	(+)	AK	DESIGNATED CONTRACTING STATES: Kind code of corresponding patent document: A1; List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE;
20020904	(+)	AX	EXTENSION OF THE EUROPEAN PATENT TO : AL;LT;LV;MK;RO;SI;
20051019	(-)	18D	DEEMED TO BE WITHDRAWN Effective date: 20050201;

**EP1226510A4 20060906**  
**EP1226510A1 20020731**

**(ENG) METHOD AND APPARATUS FOR PROVIDING CALCULATED AND SOLUTION- ORIENTED PERSONALIZED SUMMARY-REPORTS TO A USER THROUGH A SINGLE USER- INTERFACE**

**Assignee:** YODLEE COM INC US

**Inventor(s):** RANGAN P VENKAT US ; SHARMA MANOJ US ; RAJAN SREERANGA P US ; WU JONATHAN US

**Application No:** EP 00966754 A

**Filing Date:** 20000919

**Issue/Publication Date:** 20060906

**Priority Data:** US 0025672 20000919 W W; US 42562699 19991022 A;

**IPC (International Class):** G06Q04000; G06F01500; G06F01300; G06F01730

**ECLA (European Class):** G06F01730W1F

**Designated Countries:**

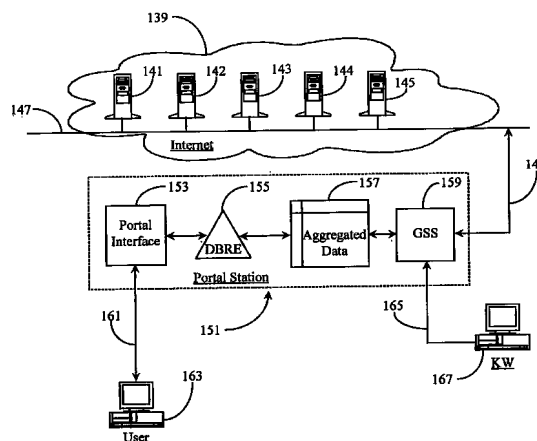
----Designated States: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

**Publication Language:** ENG

**Agent(s):** Schaefer, Wolfgang 00062023 Dreiss, Fuhlendorf, Steimle & Becker Postfach 10 37 62 70032 Stuttgart DE

**Legal Status:**

Date	+/-	Code	Description
20060906	(+)	A4	SUPPLEMENTARY SEARCH REPORT Effective date: 20060803;
20060906		RIC1	CLASSIFICATION (CORRECTION) IPC: G06F 15/00 20060101AFI20010515BHEP;
20060906		RIC1	CLASSIFICATION (CORRECTION) IPC: G06F 17/30 20060101ALI20060728BHEP;
20061227	(+)	17Q	FIRST EXAMINATION REPORT Effective date: 20061124;



**EP1242948A1 20020925**

**(ENG) METHOD AND APPARATUS FOR PROVIDING INTELLIGENT RECOMMENDATIONS TO USERS REGARDING ONLINE ACTIVITIES BASED ON KNOWLEDGE OF DATA FROM A USER'S MULTIPLE WEB-SERVICES**

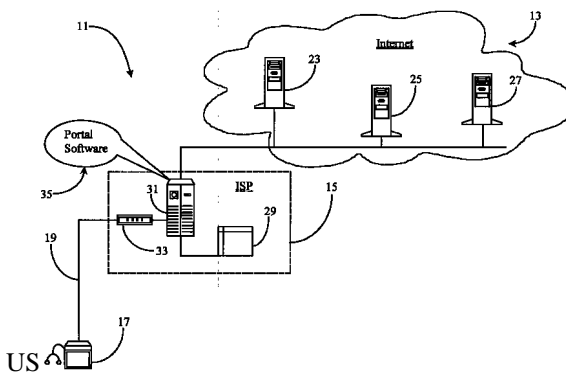
**Assignee:** YODLEE INC US

**Inventor(s):** RAJAN SREERANGA US ; WU JONATHAN US

**Application No:** EP 00978654 A

**Filing Date:** 20001113

**Issue/Publication Date:** 20020925



**Abstract:** (ENG) An Internet portal system for providing recommendations to subscribers of the portal has a data gathering system operating on the portal system, gathering data from multiple Internet sites (23, 25, 27) associated with the subscriber (17), a tracking system (35) monitoring the subscriber's on-line activity; and a recommendation engine for transmitting recommendations to the subscriber. The system is characterized in that the portal system monitors the subscriber's on-line activity, and transmits recommendations to the subscriber based on the subscriber's on-line activity and on subscriber information stored in the data repository. The system can make recommendations in a variety of situations, such as when a subscriber is shopping on-line, making investment decisions, or making banking decisions, for example.

**Priority Data:** US 0031307 20001113 W W N; US 46151599 19991214 A Y;

**IPC (International Class):** G06Q01000; G06Q04000; G06Q03000; H04L02908

**ECLA (European Class):** G06Q03000C; H04L02908A7; H04L02908N21; H04L02908N29U

**Designated Countries:**

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** White, Duncan Rohan 00086301 Edward Evans Barker Clifford's Inn Fetter Lane London EC4A 1BZ GB

**Legal Status:**

Date	+/-	Code	Description
20020925	(+)	17P	REQUEST FOR EXAMINATION FILED Effective date: 20020624;
20020925	(+)	AK	DESIGNATED CONTRACTING STATES: Kind code of corresponding patent document: A1; List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR;
20020925	(+)	AX	EXTENSION OF THE EUROPEAN PATENT TO : AL;LT;LV;MK;RO;SI;
20021127	( )	RIN1	INVENTOR (CORRECTION) Inventor name: RAJAN, SREERANGA;
20021127	( )	RIN1	INVENTOR (CORRECTION) Inventor name: WU, JONATHAN;
20030507	(-)	18W	WITHDRAWN Effective date: 20030304;



**EP1290585A4 20030806**  
**EP1290585A1 20030312**

**(ENG) NETWORK-BASED BOOKMARK MANAGEMENT AND WEB-SUMMARY SYSTEM**

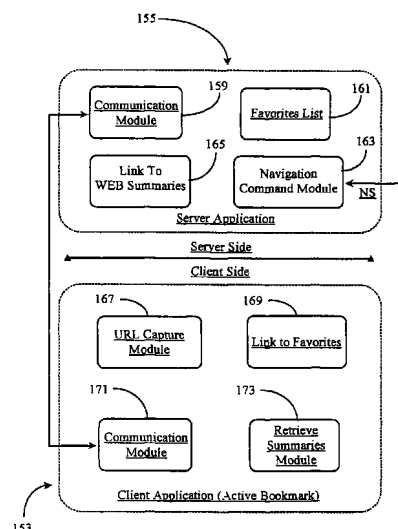
**Assignee:** YODLEE INC US

**Inventor(s):** WU JONATHAN US ; RAJAN SREERANGAN P US

**Application No:** EP 01931085 A

**Filing Date:** 20010507

**Issue/Publication Date:** 20030806



**Abstract:** (ENG) A network-based URL management and data gathering system is provided. The system utilizes a client-side utility (153) for capturing URLs during normal Web browsing (167), and a server-side utility (155) for organizing and managing the captured URLs on the network. The server-side utility periodically sends a request to a proxy browsing and data gathering utility for navigating to and retrieving data from Web pages associated with the captured URLs. Data retrieved from the Web pages is returned in summary form (165) for presentation to subscribing users via retrieve summaries module (173). In preferred embodiments, the system is practiced on the Internet network between users operating an Internet-capable appliance having an Internet connection, and an Internet portal service.

**Priority Data:** US 0114730 20010507 W W N; US 57549100 20000518 A Y;

**IPC (International Class):** G06F01730

**ECLA (European Class):** G06F01730W5K

**Designated Countries:**

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Dreiss, Fuhlendorf, Steimle & Becker 00100863

Patentanwaelte Postfach 10 37 62 70032 Stuttgart

**Legal Status:**

Date	+/-	Code	Description
20030312	(+)	17P	REQUEST FOR EXAMINATION FILED Effective date: 20021102;
20030312	(+)	AK	DESIGNATED CONTRACTING STATES: List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR;
20030312	(+)	AK	DESIGNATED CONTRACTING STATES: Kind code of corresponding patent document: A1; List of designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR;
20030312	(+)	AX	EXTENSION OF THE EUROPEAN PATENT TO List of countries concerned with an event: AL LT LV MK RO SI;
20030806	(+)	A4	SUPPLEMENTARY SEARCH REPORT Effective date: 20030624;
20031029	(+)	17Q	FIRST EXAMINATION REPORT Effective date: 20030912;



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20050615 (-) 18D DEEMED TO BE WITHDRAWN Effective date: 20041214;

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**JP2003501725T 20030114****NotAvailable****Application No:** JP 2001500971 T

[ no drawing available]

**Filing Date:** 20000418**Issue/Publication Date:** 20030114

**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 32359899 19990601 A Y; US 0010411 20000418 W W N;**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9**Legal Status:** There is no Legal Status information available for this patent

**JP2003505784T 20030212****NotAvailable****Application No:** JP 2001513028 T

[ no drawing available]

**Filing Date:** 20000707**Issue/Publication Date:** 20030212**Abstract:** NotAvailable**Priority Data:** US 36291499 19990727 A X; US 0018542 20000707 W V;**IPC (International Class):** G06F01300; G06F01730**Legal Status:** There is no Legal Status information available for this patent**JP2003514271T 20030415****NotAvailable****Application No:** JP 2001533529 T

[ no drawing available]

**Filing Date:** 20000919**Issue/Publication Date:** 20030415**Abstract:** NotAvailable**Priority Data:** US 42562699 19991022 A X; US 0025672 20000919 W V;**IPC (International Class):** G06F01760; G06F01300; G06F01500; G06F01730**Legal Status:** There is no Legal Status information available for this patent**JP2004501411T 20040115****NotAvailable****Application No:** JP 2001546026 T

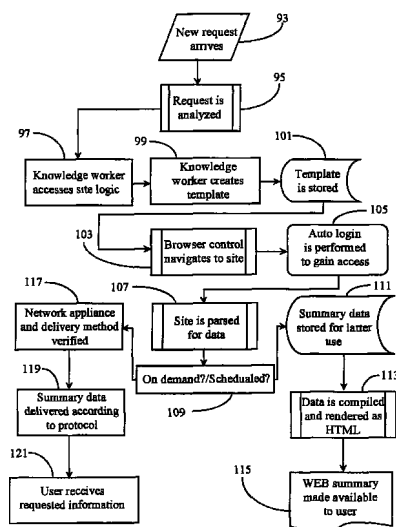
[ no drawing available]

**Filing Date:** 20001113**Issue/Publication Date:** 20040115**Abstract:** NotAvailable**Priority Data:** US 0031307 20001113 W W; US 46151599 19991214 A;**IPC (International Class):** G06Q04000; G06Q01000; H04L02908; G06Q03000**ECLA (European Class):** G06Q03000C; H04L02908A7; H04L02908N21; H04L02908N29U**Legal Status:** There is no Legal Status information available for this patent



**JP2004509380T 20040325****NotAvailable****Application No:** JP 2001585082 T

[ no drawing available]

**Filing Date:** 20010507**Issue/Publication Date:** 20040325**Abstract:** NotAvailable**Priority Data:** US 57549100 20000518 A X; US 0114730 20010507 W V;**IPC (International Class):** G06F01730**Legal Status:** There is no Legal Status information available for this patent**WO2000073921A1 20001207****(ENG) SERVER-SIDE WEB SUMMARY GENERATION AND PRESENTATION****Assignee:** YODLEE INC US**Inventor(s):** INALA SUMAR KUMAR ; RANGAN P VENKAT ; SATYAVOLU RAMAKRISHNA ; RAJAN SREERANGA PRASANNAKUMAR**Application No:** US 0010411 W**Filing Date:** 20000418**Issue/Publication Date:** 20001207

**Abstract:** (ENG) A portal server includes a software agent configured to do summary searches for subscribers based on Internet destinations provided by the subscribers, to retrieve information from such destinations based on pre-programmed site information (107), and to download the summary information to the subscriber (119, 115). The destinations and the nature of the information to be retrieved is pre-programmed. There is further a configuration and initiation interface for a subscriber to set up and start a summary search. In some cases the summary searches are configured for individual clients as templates stored (101) and retrieved at the Internet-connected server. Also in some cases (109) retrieved information is immediately sent to the subscriber, and in other situations such information is saved at the portal to be retrieved by a subscriber at a later time (111). In preferred embodiments of the invention autologins are accomplished (105) for a subscriber at Internet destinations by use of pre-stored configuration information.

**Priority Data:** US 32359899 19990601 A Y;**IPC (International Class):** G06F01300; G06F01200; G06F01500; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9**Designated Countries:**

---Designated States: (national) AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN



YU ZA ZW ::: (ARIPO) AP GH GM KE LS MW SD SL SZ TZ UG ZW  
 ----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM  
 ----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 ----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20001207	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20001207	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20010131	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20010322	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20011130	( )	ENP	ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP; Corresponding patent document: 2001 500971; Kind code of corresponding patent document: A;
20011206	(+)	WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE Corresponding patent document: 2000923475; Country code of corresponding patent document: EP;
20020103	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020103	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020403	(+)	WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE Corresponding patent document: 2000923475; Country code of corresponding patent document: EP;
20020404	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;

**WO2001008000A1 20010201**

**(ENG) NETWORKED ARCHITECTURE FOR ENABLING AUTOMATED GATHERING OF INFORMATION FROM WEB SERVERS**

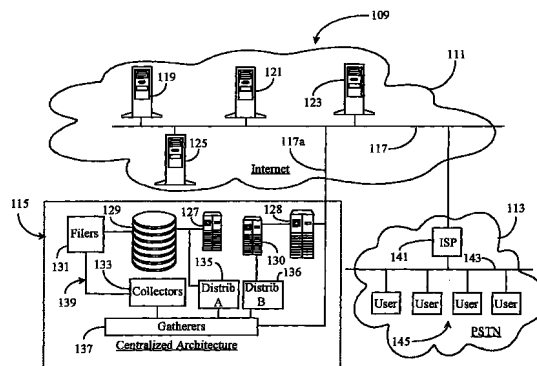
**Assignee:** YODLEE COM INC US

**Inventor(s):** INALA SUMAR KUMAR ; SATYAVOLU RAMAKRISHNA ; RANGAN P VENKAT

**Application No:** US 0018542 W

**Filing Date:** 20000707

**Issue/Publication Date:** 20010201



**Abstract:** L'invention concerne un système de collecte de données et de compte rendu permettant de collecter des sommaires WEB de l'Internet d'abonnés individuels vers un système abonné portique. Ce système a plusieurs serveurs collecteurs (137), chacun étant relié à l'Internet (109), à une hiérarchie ascendante de serveurs de distribution de demandes d'exécution de travaux (135) et (136), et à une hiérarchie ascendante de serveurs collecteurs (133). Un générateur de demande d'exécution de travaux au sommet de la hiérarchie des serveurs de distribution génère des demandes d'exécution de travaux pour la collecte de sommaires WEB, et un serveur classeur (131) au sommet de la hiérarchie de serveurs collecteurs écrit les données dans une base de données (129). Le flux des travaux s'effectue par des demandes d'exécution de travaux issues du générateur de demandes d'exécution de travaux vers le bas de la hiérarchie des serveurs distributeurs jusqu'aux serveurs collecteurs, où les demandes d'exécution des travaux sont accomplies par la collecte de sommaires WEB de serveurs Internet selon les demandes d'exécution de travaux, et par des données collectées des serveurs collecteurs vers le sommet de la hiérarchie des serveurs collecteurs jusqu'au serveur de classement.

**Priority Data:** US 36291499 19990727 A I;

**IPC (International Class):** G06F00700; G06F01500; G06F01700; G06F01721; G06F01724; G06F01730

**ECLA (European Class):** G06F01730W3

**Designated Countries:**

----Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

----Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TZ UG ZW

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20010201	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20010201	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind



			code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20010328	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20010531	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20020207	(+)	WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE Corresponding patent document: 2000945208; Country code of corresponding patent document: EP;
20020227	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020227	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020523	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20020904	(+)	WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE Corresponding patent document: 2000945208; Country code of corresponding patent document: EP;
20050201	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Corresponding patent document: 2000945208; Country code of corresponding patent document: EP;

**WO2001020510A1 20010322**

**(ENG) METHOD AND APPARATUS FOR RESTRUCTURING OF PERSONALIZED DATA FOR TRANSMISSION FROM A DATA NETWORK TO CONNECTED AND PORTABLE NETWORK APPLIANCES**

**Assignee:** YODLEE COM INC US

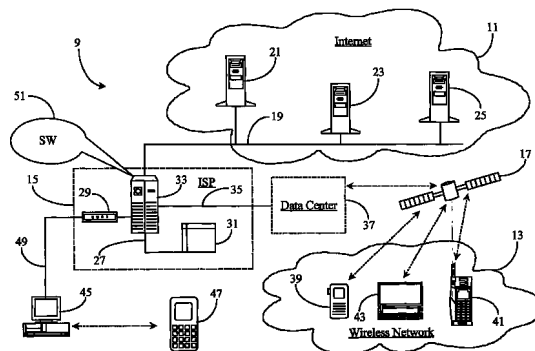
**Inventor(s):** DASWANI NEIL ; INALA SUMAN KUMAR ; SATYAVOLU RAMAKRISHNA ; RANGAN P VENKAT ; RAJAN SREERANGA P

**Application No:** US 0023777 W

**Filing Date:** 20000829

**Issue/Publication Date:** 20010322

**Abstract:** (ENG) A system (9) for retrieving and disseminating information records form Internet sources (21, 23, 25) includes a client device(39, 41, 43) and an intermediary server system (15), including software (51), between the client device (39, 41, 43) and the Internet (11). The system collects a record specific to a client (39, 41, 43) from an individual one of said Internet sources (21, 23, 25) in a first form in which the record is recorded at the Internet source (21, 23, 25), transforms the record from the first form to a second form specific to an application other than an Internet browser application, the application executable by the client device (39, 41, 43) for display in the application other than an Internet browser application executable by the client device (39, 41, 43). In some cases, the client device (39, 41, 43) connects by a data link that is not an Internet-compatible link.



**Priority Data:** US 39832099 19990916 A Y;

**IPC (International Class):** G06Q03000; G06F01730

**ECLA (European Class):** G06F01730W9V; G06Q03000A

**Designated Countries:**

----Designated States: (national) AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW ::: (ARIPO) AP GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
 ----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM  
 ----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 ----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20010322	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20010322	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20010516	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20010823	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20020416	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020416	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20021127	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20040602	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;

**WO2001031463A1 20010503**

**(ENG) METHOD AND APPARATUS FOR PROVIDING CALCULATED AND SOLUTION-ORIENTED PERSONALIZED SUMMARY-REPORTS TO A USER THROUGH A SINGLE USER-INTERFACE**

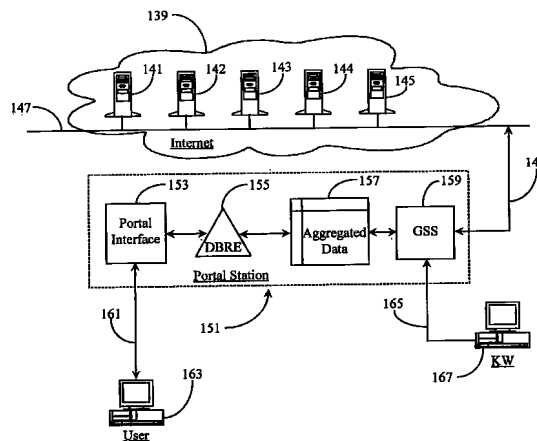
**Assignee:** YODLEE COM INC US

**Inventor(s):** RANGAN P VENKAT ; SHARMA MANOJ ; RAJAN SREERANGA P ; WU JONATHAN

**Application No:** US 0025672 W

**Filing Date:** 20000919

**Issue/Publication Date:** 20010503



**Abstract:** An Internet-connected portal system (151) has a data repository (157), a data-gathering system (159), a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the request algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system (151) transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository (157) storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system (159) to retrieve data from the associated Internet sites (141-145). In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 42562699 19991022 A I;

**IPC (International Class):** G06F01500

**ECLA (European Class):** G06F01730W1F

**Designated Countries:**

---Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

---Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TZ UG ZW

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20010503	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;



20010503	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20010704	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20010823	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20020419	( )	ENP	ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP; Corresponding patent document: 2001 533529; Kind code of corresponding patent document: A;
20020419	(+)	WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE Corresponding patent document: 2000966754; Country code of corresponding patent document: EP;
20020522	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020522	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020731	(+)	WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE Corresponding patent document: 2000966754; Country code of corresponding patent document: EP;
20021002	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;

**WO2001045005A1 20010621**

**(ENG) METHOD AND APPARATUS FOR PROVIDING INTELLIGENT RECOMMENDATIONS TO USERS REGARDING ONLINE ACTIVITIES BASED ON KNOWLEDGE OF DATA FROM A USER'S MULTIPLE WEB-SERVICES**

**Assignee:** YODLEE COM INC US

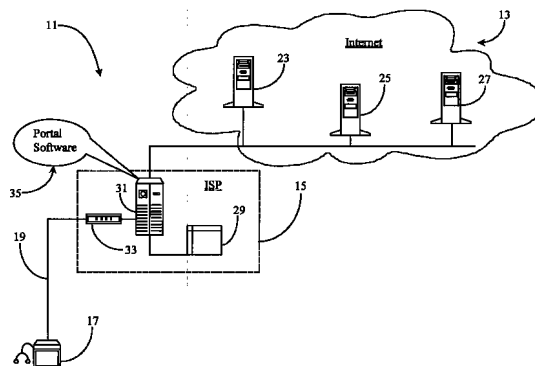
**Inventor(s):** RAJAN SREERANGA ; WU JONATHAN

**Application No:** US 0031307 W

**Filing Date:** 20001113

**Issue/Publication Date:** 20010621

**Abstract:** An Internet portal system for providing recommendations to subscribers of the portal has a data gathering system operating on the portal system, gathering data from multiple Internet sites (23, 25, 27) associated with the subscriber (17), a tracking system (35) monitoring the subscriber's on-line activity; and a recommendation engine for transmitting recommendations to the subscriber. The system is characterized in that the portal system monitors the subscriber's on-line activity, and transmits recommendations to the subscriber based on the subscriber's on-line activity and on subscriber





information stored in the data repository. The system can make recommendations in a variety of situations, such as when a subscriber is shopping on-line, making investment decisions, or making banking decisions, for example. Système de portail Internet pour donner des recommandations aux abonnés du portail; le système comprend un système de collecte de données fonctionnant sur le système de portail, qui collecte les données provenant de sites Internet (23, 25, 27) multiples associés à l'utilisateur (17), un système de suivi (35) qui surveille l'activité de l'abonné en ligne; et un moteur de recommandations pour transmettre les recommandations à l'abonné. Le système est caractérisé en ce que le système de portail surveille les activités de l'abonné en ligne, une unité d'informations relatives à l'utilisateur étant stockée dans le dépôt de données. Le système peut émettre des recommandations dans les situations les plus diverses, par exemple, lorsque l'abonné fait des achats en ligne ou prend des décisions d'investissement ou bancaires.

**Priority Data:** US 46151599 19991214 A;

**IPC (International Class):** G06Q01000; G06Q04000; G06Q03000; H04L02908

**ECLA (European Class):** G06Q03000C; H04L02908A7; H04L02908N21; H04L02908N29U

**Designated Countries:**

---Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

---Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TR TZ UG ZW

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20010621	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20010621	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20010816	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20010823	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20020613	( )	ENP	ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP; Corresponding patent document: 2001 546026; Kind code of corresponding patent document: A;
20020624	(+)	WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE Corresponding patent document: 2000978654; Country code of corresponding patent document: EP;





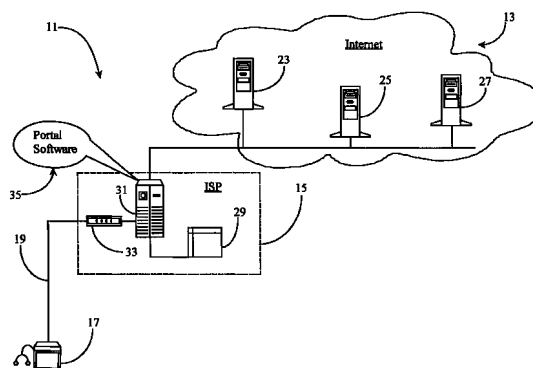
20020715	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020715	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20020925	(+)	WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE Corresponding patent document: 2000978654; Country code of corresponding patent document: EP;
20021121	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20030304	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Corresponding patent document: 2000978654; Country code of corresponding patent document: EP;

**WO2001080067A1 20011025****(ENG) METHOD AND APPARATUS FOR PROVIDING  
AUTO-REGISTRATION AND SERVICE ACCESS TO  
INTERNET SITES FOR INTERNET PORTAL SUBSCRIBERS****Assignee:** YODLEE INC US**Inventor(s):** RANGARAJAN ANAND ; LEE JI HOON ;  
INALA SUMAN KUMAR ; SATYAVOLU  
RAMAKRISHNA ; RAJAN SREERANGA P**Application No:** US 0108265 W**Filing Date:** 20010314**Issue/Publication Date:** 20011025

**Abstract:** (ENG) A method and apparatus is provided for populating and submitting electronic forms by proxy over a data-packet-network (19). The apparatus comprises a software application (35) running on a system of network-connected servers (31) that enables a user (17), connected in session with one of the servers, to navigate to a site (23) containing an electronic form and obtain data about the site and about the form. The data obtained is used in conjunction with data about the user to construct a machine readable job order upon user request that may be executed for the purpose of automatic form population and submission to a host sponsoring site (15). Upon acceptance of the submitted form, data used for passwords, log-in codes and user-names is returned to a data repository where it is entered along with specific site data as a new registered site item for a registering user such that future navigation to the site, auto log-in and data may be performed automatically on behalf of the user.

**Priority Data:** US 55034800 20000414 A Y;**IPC (International Class):** H04L02906; G06F01724; H04L02908**ECLA (European Class):** H04L02906S8D; G06F01724F; H04L02906S8B; H04L02908A7; H04L02908N9;  
H04L02908N27A; H04L02908N29U; H04L02908N33**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS  
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
TZ UA UG UZ VN YU ZA ZW ::: (ARIPO) AP GH GM KE LS MW MZ SD SL SZ TZ UG ZW



----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM  
 ----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
 ----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20011025	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20011025	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20011219	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20020926	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20021114	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20021114	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20030709	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20041217	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;

**WO2001071563A1 20010927**

**(ENG) METHOD AND APPARATUS FOR RETRIEVING INFORMATION FROM SEMI-STRUCTURED, WEB-BASED DATA SOURCES**

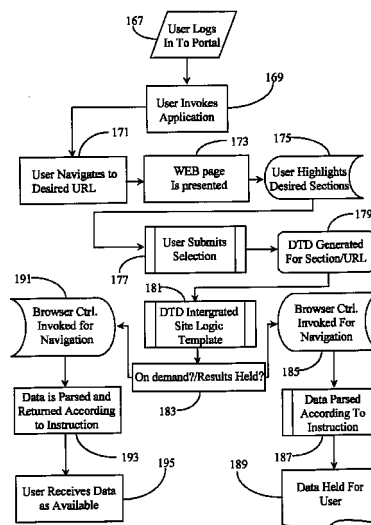
**Assignee:** YODLEE COM INC US

**Inventor(s):** RAJAN SREERANGA P ; PANDURANGAN SENTHIL KUMAR ; WU JONATHAN

**Application No:** US 0108360 W

**Filing Date:** 20010315

**Issue/Publication Date:** 20010927



**Abstract:** (ENG) <emi file="US0108360\_27092001\_pf\_fp.g4" id="0.0" scale="64" he="185MM" wi="139MM" lx="1MM" ly="1MM"/><p>The configurable Internet WEB search system has a browser module for navigating to and displaying a WEB page, a block selection and configuration function having input tools for a user to select at least one block portion (175) of a displayed WEB page for data retrieval, a data-type input function for a user to denote data type to be extracted from a selected block portion (179), and a search implementation function for implementing a search under the search system. The data type entered by the data input function is associated with a WEB page block selected, and upon search implementation the block selected is searched for the data type required, and data found is retrieved to be provided to the user (195). In a preferred embodiment portions of the system are executed on a user station, and other portions on a Portal server to which the user may subscribe.</p>

**Priority Data:** US 53264700 20000322 A;

**IPC (International Class):** G06F01730

**ECLA (European Class):** G06F01730W1

**Designated Countries:**

----Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

----Regional Treaties: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20010927	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
20010927	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; GH GM KE LS MW





			document: A1; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20011122	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20020116	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20020411	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20021011	( )	ENP	ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP; Corresponding patent document: 2001 585082; Kind code of corresponding patent document: A;
20021102	(+)	WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE Corresponding patent document: 2001931085; Country code of corresponding patent document: EP;
20030312	(+)	WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE Corresponding patent document: 2001931085; Country code of corresponding patent document: EP;
20041214	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Corresponding patent document: 2001931085; Country code of corresponding patent document: EP;

**WO2001090942A1 20011129**

**(ENG) COBRANDING PORTAL SERVICES AND NORMALIZING ADVERTISEMENTS DELIVERED**

**Assignee:** YODLEE COM INC US

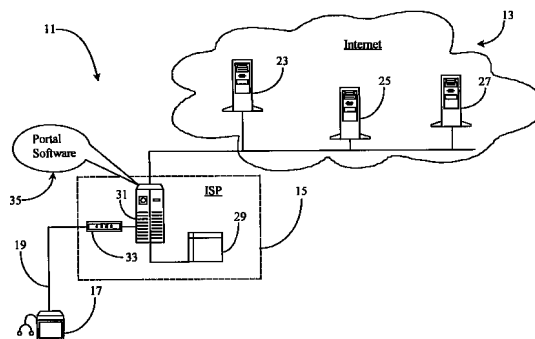
**Inventor(s):** SANKURATRIPTI SUBHASH ; LEE JI HOON ; SATYAVOLU RAMAKRISHNA

**Application No:** US 0114751 W

**Filing Date:** 20010507

**Issue/Publication Date:** 20011129

**Abstract:** A network server (31) dedicated for the purpose of controlling the service function of disparate ad servers (23) (25) and (27) operating on the network is provided. The server (31) utilizes a data port for communicating with ad servers (23) (25) and (27) connected to the network, a data storage facility (29) for storing data, a data processing means (17) for manipulating and controlling stored data, and a software means (35) for creating, updating, and maintaining data associations among the stored data. The server (31) functions to broker advertisements from disparate ad servers (23) (25) and (27) such



that they are normalized, and in some embodiments, personalized when they appear in the target interfaces. Cette invention concerne un serveur de réseau (31) conçu spécifiquement pour gérer la fonction service de serveurs publicitaires disparates (23) (25) et (27) qui opèrent sur le réseau. Le serveur (31) utilise un port données pour communiquer avec les serveurs publicitaires (23) (25) et (27) connectés au réseau, une installation de stockage de données (29) pour le stockage de données, un dispositif de traitement de données (17) pour la manipulation et la commande des données stockées et un dispositif logiciel (35) pour la création, la mise à jour et l'entretien d'associations de données parmi les données stockées. Le serveur (31) arrange les publicités provenant des serveurs publicitaires disparates (23) (25) et (27) de manière à ce qu'elles soient normalisées et, selon certains modes de réalisations, personnalisées lorsqu'elles apparaissent dans des interfaces cibles.

**Priority Data:** US 57369700 20000519 A;

**IPC (International Class):** G06F01730

**ECLA (European Class):** G06F01730W1F; G06Q03000A

**Designated Countries:**

---Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

---Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TR TZ UG ZW

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20011129	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW;
20011129	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG;
20020123	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20020404	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030813	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20050404	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;

**WO2002056142A3 20030206**  
**WO2002056142A2 20020718**

**(ENG) METHOD AND APPARATUS FOR OBTAINING AND AGGREGATING OFF-LINE USER DATA FOR RE-PACKAGING AND PRESENTATION TO USERS OVER A DATA-PACKET-NETWORK**

**Assignee:** YODLEE INC US

**Inventor(s):** SINGH SUKHINDER ; RAJAN SREERANGA PRASANNAKUMAR

**Application No:** US 0203066 W

**Filing Date:** 20020108

**Issue/Publication Date:** 20030206

**Abstract:** (ENG) A data access server (25) for requesting accessing off-line of message data (24/26) on a network (9).

**Priority Data:** US 75755301 20010109 A Y;

**Related Application(s):** 20030206 200306 3 R4

**IPC (International Class):** H04L02908; H04L02906; H04M003533

**ECLA (European Class):** H04L02908N1; H04L02906; H04L02908N27D; H04L02908N27F; H04M003533R

**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW ::: (ARIPO) AP GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM

----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

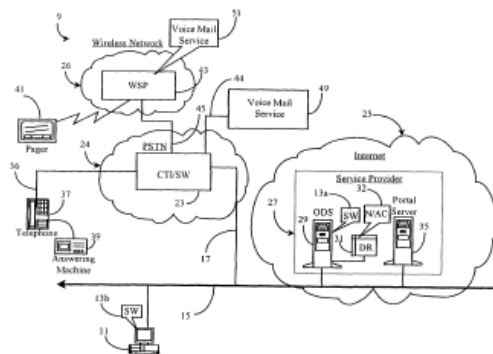
**Filing Language:** ENG

**Date of Deferred Publication of Search Report:**

--20030206

**Legal Status:**

Date	+/-	Code	Description
20020718	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A2; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20020718	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A2; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM





			AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20020911	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20030206	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A3; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20030206	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A3; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20030220	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030220	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030809	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20030809	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20031120	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20040303	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20060327	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;
20060327	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Country code of corresponding patent document: JP;



WO2002056143A3 20090611  
WO2002056143A2 20020718

**(ENG) INTERACTIVE CALCULATION AND PRESENTATION OF FINANCIAL DATA RESULTS THROUGH A SINGLE INTERFACE ON A DATA-PACKET-NETWORK**

**Assignee:** YODLEE COM INC US

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
KELLEY JOHN US ; HAYWARD BLAKE  
EARL US ; SCOTT JENNIFER GREENE US ;  
PANDURANGAN SENTHIL KUMAR US

**Application No:** US 0203114 W

**Filing Date:** 20020109

**Issue/Publication Date:** 20090611

**Abstract:** (ENG) An interactive user-interface for ordering specific calculated and solution-oriented results related to finance is provided within a software suite for enabling viewing and manipulation of aggregated data compiled (157) from data sources and accessible through a single interfacing node operated on a data-packet-network (153). The interface comprises, an interactive drop-down menu containing questions relating to various aspects of financial planning, an interactive inputs section containing input data fields and selection boxes, the input section for configuring a calculative order, a submission function for submitting the calculative order upon completion thereof and a result window for displaying the data results derived from the calculations ordered. A user (163) operating within the user-interface selects an issue from the drop-down menu, populates any vacant data fields and or selection boxes displayed in the inputs section as a result of selecting an issue, and submit the data for server-side calculation and subsequent display of the calculated results.

**Priority Data:** US 75888001 20010110 A Y;

**IPC (International Class):** G06Q01000

**ECLA (European Class):** G06Q01000C

**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW ::: (ARIPO) AP GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM

----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** BOYS, Donald, R. P.O. Box 187, Aromas, CA 95004, US US

**Legal Status:** There is no Legal Status information available for this patent

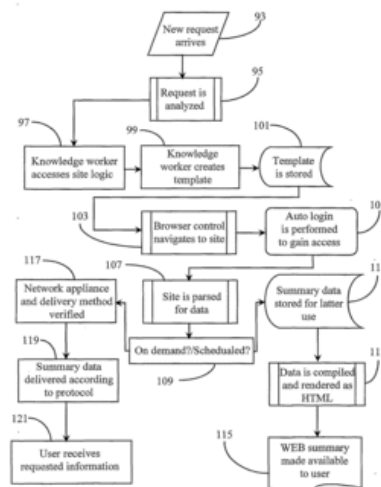


Fig. 5

**WO2002067082A3 20031113**  
**WO2002067082A2 20020829**

**(ENG) INTERACTIVE BILL PAYMENT CENTER**

**Assignee:** YODLEE COM INC US

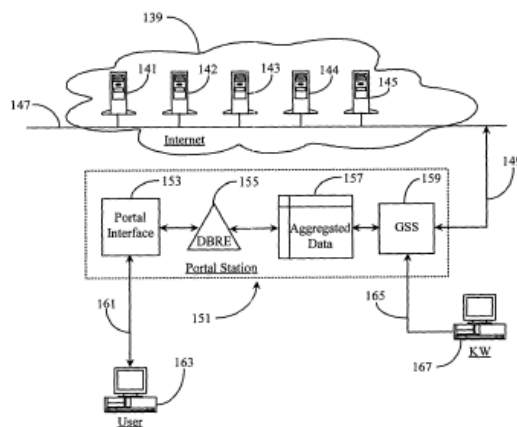
**Inventor(s):** KUMAR SRIHARI ; DESAI SATYEN ; KELLEY JOHN ; HAYWARD BLAKE EARL ; SCOTT JENNIFER GREEN ; PANDURANGAN SENTHIL KUMAR

**Application No:** US 0204095 W

**Filing Date:** 20020212

**Issue/Publication Date:** 20031113

**Abstract:** (ENG) <emi file="US0204095\_13112003\_pf\_fp.g4" id="0.0" scale="43" he="165MM" wi="199MM" lx="1MM" ly="1MM"/><p>A software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network is provided. A bill-payment module (151) is provided within the software suite and comprises, an interactive main interface accessible from the module for listing the bills due and payment accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing bill history, an interactive set-up link embedded in the main interface for providing access to a secondary interface for configuring recurring payments, an interactive transfer-funds link embedded in the main interface for providing access to a secondary interface for enabling automated transfer of funds between registered accounts, an interactive calendar link embedded in the main interface for providing access to a secondary interface for viewing calendar data, an interactive drop-down menus.</p>



**Priority Data:** US 78592901 20010216 A;

**Related Application(s):** 20031113 200346 3 R4

**IPC (International Class):** G06F01760

**ECLA (European Class):** G06Q03000B

**Designated Countries:**

----Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW  
 ----Regional Treaties: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Agent(s):** BOYS, Donald, R. P.O. Box 187, Aromas, CA 95004 US

**Legal Status:**

Date	+/-	Code	Description
20020829	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A2; AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW



20020829	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A2; GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
20021023		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20031224		REG	REFERENCE TO NATIONAL CODE : DE; : 8642;
20040407	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20060403		NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: : JP;

**WO2002082233A3 20030306**  
**WO2002082233A2 20021017**

**(ENG) INTERACTIVE FINANCIAL PORTFOLIO TRACKING INTERFACE**

**Assignee:** YODLEE INC US

[ no drawing available]

**Inventor(s):** KUMAR SRIHARI ; DESAI SATYEN ; KELLEY JOHN ; HAYWARD BLAKE EARL ; SCOTT JENNIFER GREENE ; PANDURANGAN SENTHIL KUMAR

**Application No:** US 0207605 W

**Filing Date:** 20020313

**Issue/Publication Date:** 20030306

**Abstract:** (ENG) A portfolio-tracking module having a displayable summary interfaces is provided within a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources (23,25,27) and accessible through a single interfacing node operated on a data-packet-network. The portfolio-tracking module comprises, an interactive main interface accessible through the summary interface, the main interface for listing stocks and investment accounts for viewing, an interactive menu provided within the main interface for selecting views of individual investment accounts, the views appearing within the same or within a secondary interface, an interactive selection interface provided within the main interface for selecting investment accounts for data tracking, a first interactive hyperlink embedded within the main interface for linking the main interface to a secondary interface for viewing tracked information about personal investments and a second interactive hyperlink embedded within the main interface for linking the main interface to a secondary interface for viewing tracked information about personal investments and a second interactive hyperlink embedded within the main interface for linking the main interface for linking the main interface to a secondary configuration interface for adding new investments accounts or stocks for tracking.

**Priority Data:** US 82661301 20010404 A Y;

**Related Application(s):** 20030306 200310 3 R4

**IPC (International Class):** G06Q04000

**ECLA (European Class):** G06Q04000C



**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW ::: (ARIPO) AP GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM

----EPO Extension States: (EPO) EP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Date of Deferred Publication of Search Report:**

--20030306

**Legal Status:**

Date	+/-	Code	Description
20021017	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A2; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20021017	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A2; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20021218	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20030306	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A3; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20030306	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A3; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20030320	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030320	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030320	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)



20040219	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20040602	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20060412	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;
20060412	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Country code of corresponding patent document: JP;

**WO2002082288A1 20021017**

**(ENG) INTERACTIVE TRANSACTION CENTER INTERFACE**

**Assignee:** YODLEE COM INC US

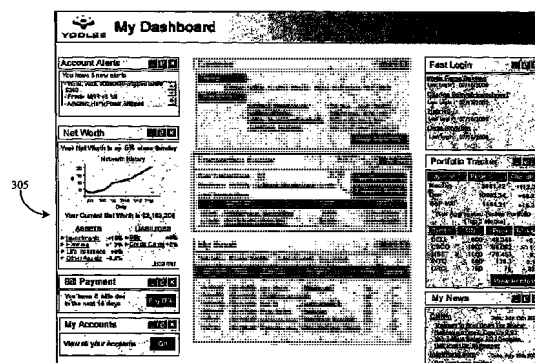
**Inventor(s):** KUMAR SRIHARI ; DESAI SATYEN ; KELLEY JOHN ; HAYWARD BLAKE EARL ; SCOTT JENNIFER GREENE ; PANDURANGAN SENTHIL KUMAR

**Application No:** US 0208773 W

**Filing Date:** 20020321

**Issue/Publication Date:** 20021017

**Abstract:** A transaction module having a summary interface is provided as part of a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The transaction module comprises, an interactive main interface (305) accessible through the summary interface, the main interface for listing new transactions related to registered financial accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing transaction history (307), an interactive menu provided within the main interface for assigning categories to the listed transactions, an interactive save feature for saving category assignments to the listed transactions; a interactive bill-payment link provided within the main interface for linking the interface to a bill-payment module and an interactive transfer-funds (309) link provided within the summary interface of the module for linking the summary face of the module to a secondary interface for transferring funds (309) from one account to another. A user operating the main interface from a remote node having access to another. A user operating the main interface from a remote node having access to the data-packet-network may view all transactions according to option of category, account, and time period. L'invention concerne un module de transaction doté d'une interface de sommaire faisant partie d'une suite de logiciels permettant de visualiser et de manipuler plusieurs catégories de données compilées à partir de diverses sources de données et accessibles à travers un seul noeud d'interface exploité sur un réseau de données par paquets. Le module de transaction comprend une interface principale interactive accessible à travers l'interface de sommaire, cette interface servant à lister de nouvelles transactions liées à des comptes financiers enregistrés, un lien historique interactif intégré à l'interface principale pour fournir un accès à une interface secondaire servant à visualiser l'historique des transactions, un menu interactif fourni dans l'interface principale pour affecter des catégories aux transactions listées, une fonction de sauvegarde interactive servant à sauvegarder des affectations de catégories aux transactions listées, un lien interactif de paiement de factures fourni dans l'interface principale pour mettre en liaison l'interface au module de paiement de factures et un lien interactif de transfert de fonds fourni dans l'interface de sommaire du module pour mettre en



liaison la face de sommaire du module à une interface secondaire pour transférer des fonds d'un compte à un autre. Un utilisateur exploitant l'interface principale à partir d'un noeud distant ayant accès au réseau de données par paquets, peut visualiser toutes les transactions par catégorie, compte et période de temps.

**Priority Data:** US 82674701 20010404 A;

**IPC (International Class):** G06F01500

**ECLA (European Class):** G06F00946R6P; G06Q03000B

**Designated Countries:**

---Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

---Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GQ GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TR TZ UG ZM ZW

**Publication Language:** ENG

**Legal Status:**

Date	+/-	Code	Description
20021017	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A1; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20021017	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A1; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20021218	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20040219	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20040616	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20060412	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;
20060412	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Country code of corresponding patent document: JP;



**WO2002077844A3 20021114**  
**WO2002077844A2 20021003**

**(ENG) TURNKEY SYSTEM PROVIDING CENTRALIZED  
 DATA AGGREGATION**

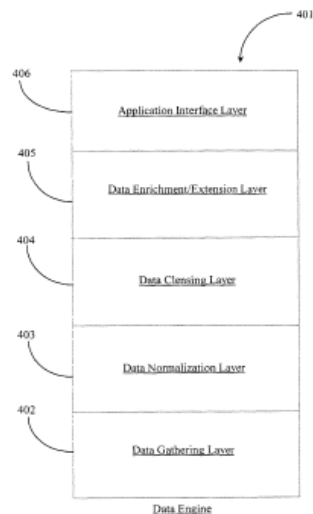
**Assignee:** YODLEE COM INC US

**Inventor(s):** SATYAVOLU RAMAKRISHNA ;  
 SANKURATRIPATI SUBHASH ;  
 PUDHUKOTTAI SAMPATHKUMAR RANGA ;  
 TSAI SIN-MEI

**Application No:** US 0208860 W

**Filing Date:** 20020322

**Issue/Publication Date:** 20021114



**Abstract:** A distributable software system (401) is disclosed for collecting and aggregating data from a network and for providing compartmentalized and optimized data summaries to third parties. The system includes a data gathering layer for gathering the data (402); a data normalization layer for normalizing data types from multiple data sources (403); a data cleansing layer for correcting data inconsistencies (404); a data enrichment layer for rendering data analyzable (405); and an application interface layer for providing multiple interfaces to multiple user applications (406). An enterprise utilizes the system to provide data aggregation and summary services to clients. In preferred embodiments, intelligence created from the activity is harnessed to provide and improve services and to enhance profitability of the enterprise. L'invention concerne un système logiciel susceptible d'être réparti, pour la collecte et l'agrégation de données depuis un réseau et pour l'établissement de récapitulatifs de données compartimentés et optimisés, au bénéfice de tiers. Le système comprend une couche de collecte de données; une couche de normalisation des types de données à partir de différentes sources de données; une couche de correction d'incohérences de données; une couche d'enrichissement de données rendant les données analysables; et une couche d'interface d'application assurant différentes interfaces à différentes applications analogues. Une entreprise peut utiliser le système pour assurer l'agrégation et la récapitulation de données à des clients. En mode de réalisation préféré, on utilise l'intelligence créée par cette activité pour fournir et améliorer des services et pour accroître la rentabilité en entreprise.

**Priority Data:** US 27850201 20010323 P;

**Related Application(s):** 20021114 200246 3 R4

**IPC (International Class):** G06F01516

**ECLA (European Class):** G06F01730B

**Designated Countries:**

---Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE  
 DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
 LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN  
 TR TT TZ UA UG UZ VN YU ZA ZM ZW

---Regional Treaties: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM  
 GN GQ GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD  
 TG TJ TM TR TZ UG ZM ZW

**Publication Language:** ENG

**Date of Deferred Publication of Search Report:**

--20021114



**Legal Status:**

<b>Date</b>	<b>+/-</b>	<b>Code</b>	<b>Description</b>
20021003	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A2; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20021003	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A2; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20021114	(+)	AK	DESIGNATED STATES Kind code of corresponding patent document: A3; List of designated states: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW;
20021114	(+)	AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS Kind code of corresponding patent document: A3; List of designated states: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG;
20021127	( )	121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION
20030206	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030206	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20030206	( )	DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)
20031023	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20031023	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): RU;
20040212	( )	REG	REFERENCE TO NATIONAL CODE Corresponding country code for PRS Code (EP REG): DE; Corresponding EP Code 1 for PRS Code (EP REG): 8642;
20040526	(-)	122	EP: PCT APP. NOT ENT. EUROP. PHASE
20060410	( )	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN: Corresponding country code for PRS Code (EP REG): JP;
20060410	(-)	WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE Country code of corresponding patent document: JP;



**US2004078423A1 20040422**

**(ENG) Method and apparatus for controlled establishment of a turnkey system providing a centralized data aggregation and summary capability to third party entities**

**Assignee:** SATYAVOLU RAMAKRISHNA US

**Inventor(s):** SATYAVOLU RAMAKRISHNA US ;  
 SANKURATRIPATI SUBHASH US ;  
 PUDHUKOTTAI SAMPATHKUMAR RANGA US ;  
 TSAI SIN-MEI US

**Application No:** US 10429602 A

**Filing Date:** 20020322

**Issue/Publication Date:** 20040422

**Abstract:** (ENG) A distributable software system is disclosed for collecting and aggregating data from a network and for providing compartmentalized and optimized data summaries to third parties. The system includes a data gathering layer for gathering the data; a data normalization layer for normalizing data types from multiple data sources; a data cleansing layer for correcting data inconsistencies; a data enrichment layer for rendering data analyzable; and an application interface layer for providing multiple interfaces to like multiple user applications. An enterprise utilizes the system to provide data aggregation and summary services to clients. In preferred embodiments, intelligence created from the activity is harnessed to provide and improve services and to enhance profitability of the enterprise.

**Priority Data:** US 10429602 20020322 A;

**IPC (International Class):** G06F01516

**ECLA (European Class):** G06Q01000F; G06Q04000A

**US Class:** 709203; 7155011

**Assignments Reported to USPTO:**

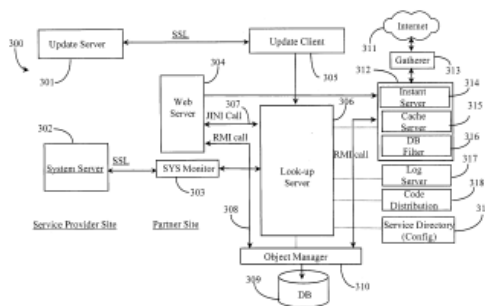
**Reel/Frame:** 12889/0090 **Date Signed:** 20020508 **Date Recorded:** 20020509

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES CALIFORNIA 94006

**Assignor:** PUDHUKOTTAI, SAMPATHKUMAR RANGANATHAN; SANKURATRIPATI, SUBHASH; SATYAVOLU, RAMAKRISHNA; TSAI, SIN-MEI

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).



**Legal Status:**

Date	+/-	Code	Description
20020509	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SATYAVOLU, RAMAKRISHNA;SANKURATRIPATI, SUBHASH;PUDHUKOTTAI, SAMPATHKUMAR RANGANATHAN;AND OTHERS;REEL/FRAME:012889/0090; Effective date: 20020508;

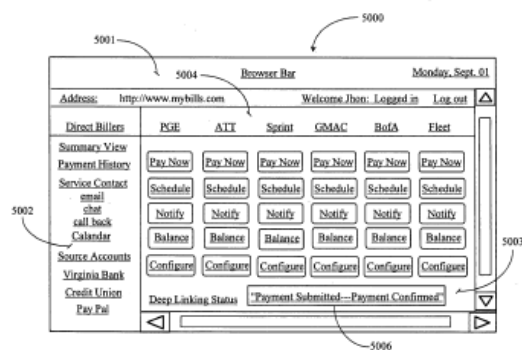


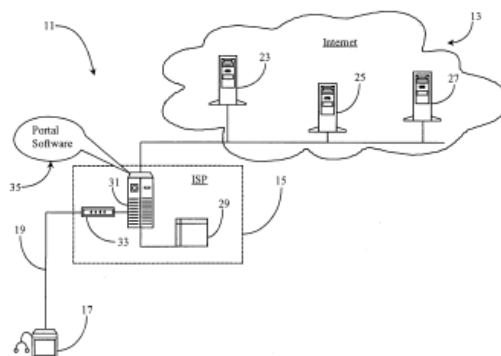
**US2005203844A1 20050915****(ENG) Method and system for network transaction management****Assignee:** FERGUSON HILL US**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US  
; SATYAVOLU RAMAKRISHNA US**Application No:** US 10727405 A**Filing Date:** 20050415**Issue/Publication Date:** 20050915

**Abstract:** (ENG) <p num="0000">A system for transacting in a network includes a service broker connected to the network, having access to necessary credentials, a service provider connected to the network, requiring credentials for transacting in regard to a client, and a client station connected to the network. A client using the client station sends a preliminary request for a transaction to the service broker, which initiates, at the appropriate time, the transaction for the client by a request to the service provider, accompanied by the appropriate credentials, and the service broker monitors the service provider after the write request for an acknowledgement of the request. </p>

**Priority Data:** US 2766904 20041229 A 1; US 10727405 20050415 A; US 32359899 19990601 A 3; US 53369203 20031231 P; US 73740400 20001214 A 2;

**Related Application(s):** 09/737404 20001214 09/323598 19990601 6199077 US GRANTED; 60/533692 20031231; 11/107274 20050415 11/027669 20041229 PENDING; 11/027669 20041229 09/737404 20001214 PENDING

**IPC (International Class):** G06F01760**US Class:** 705040**Publication Language:** ENG**Legal Status:** There is no Legal Status information available for this patent

**US2005210297A1 20050922****(ENG) Network-based bookmark management and WEB-summary system****Assignee:** WU JONATHAN**Inventor(s):** WU JONATHAN US ; RAJAN SREERANGA P  
US**Application No:** US 13415305 A**Filing Date:** 20050519**Issue/Publication Date:** 20050922

**Abstract:** (ENG) A network-based URL management and data gathering system is provided. The system utilizes a client-side utility for capturing URLs during normal Web browsing, and a server-side utility for organizing and managing the captured URLs on the network. The server-side utility periodically sends a request to a proxy browsing and data gathering utility for navigating to and retrieving data from Web pages associated with the captured URLs. Data retrieved from the Web pages is returned in summary form for presentation to subscribing users. In preferred embodiments, the system is practiced on the Internet network between users operating an Internet-capable appliance having an Internet connection, and an Internet portal service.

**Priority Data:** US 13415305 20050519 A N; US 57549100 20000518 A 1 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y; US 55034800 20000414 A 2 Y;

**Related Application(s):** 09/575491 20000518 US PENDING; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED; 09/550348 20000414 US

**IPC (International Class):** H04L00900; H04L02908; G06F01730; H04L02906

**US Class:** 726019; 707E17114

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US6594766B2 20030715**  
**US2002184534A1 20021205**

**(ENG) Method and apparatus for providing and maintaining a user-interactive portal system accessible via internet or other switched-packet-network**

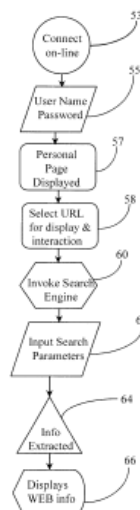
**Assignee:** YODLEE INC US

**Inventor(s):** RANGAN P VENKAT US ; INALA SAM US

**Application No:** US 18014602 A

**Filing Date:** 20020625

**Issue/Publication Date:** 20030715



**Abstract:** (ENG) An Internet Portal is enabled by software executing on an Internet-connected server. The Portal, in response to a log-on by a user, presents a secure and personalized page for and to the user, the personalized page having listed plural Internet destinations enabled by hyperlinks, wherein upon invocation of a hyperlink by the subscriber, such as by a point-and-click technique, the portal invokes a URL for the destination, and upon connection with the destination, transparently provides any required log-on information for user access at the destination. In an enhanced embodiment a search function is provided wherein a user may configure searches in any or all of the listed destinations on a personalized page. Provision is provided for log-on by limited appliances, such as by a Smartcard or embedded password, and in some embodiments functionality is provided in a browser plug-in wherein a user may navigate to a site, and, in response to a request for log-in data, the subscriber may use a hot key or pointer input, which will cause the browser to access and provide the needed data from the Password-All source.

**Priority Data:** US 18014602 20020625 A N; US 20874098 19981208 A 1 Y;

**Related Application(s):** 09/208740 19981208 6412073 20020625 US GRANTED

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F02100N5A2S

**US Class:** 726008; 705014; 705076; 707E17116; 713162

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Wright, Norman M.

**US Post Issuance:**

--US Litigations: Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 5:05cv2554 ; Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 3:05cv2554 ; Cashedge, Inc Cashedge, Inc 20060731 N.D. California 3:06cv4648

**Legal Status:** There is no Legal Status information available for this patent



**WO2005065366A3 20060622**  
**WO2005065366A2 20050721**

**(ENG) METHOD AND SYSTEM FOR VERIFYING STATE OF A TRANSACTION BETWEEN A CLIENT AND A SERVICE OVER A DATA-PACKET-NETWORK**

**Assignee:** YODLEE INC US

**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US  
 ; SATYAVOLU RAMAKRISHNA US

**Application No:** US 2004043906 W

**Filing Date:** 20041230

**Issue/Publication Date:** 20060622

**Abstract:** (ENG) A system for verifying communication established between a first and a second node over a data-packet-network (601) includes a third network node accessible from the first node (603) over the data-packet-network, the third node (604) containing network location information of the second node (602) and the network location information of at least one resource (605) accessible there from; and a navigation agent directed by the third network node for navigating over the network to the second node and to the at least one resource to gather information. In a preferred embodiment, the information gathered includes indication of receipt of data sent from the first node at the second node and indication of confirmation or authorization to access services.

**Priority Data:** US 53369203 20031231 P Y;

**Related Application(s):** 20060622 200625 3 R4

**IPC (International Class):** G06F015173

**ECLA (European Class):** H04L02906S8D; G06Q03000B; G06Q03000C

**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW ::: (ARIPO) AP BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM

----EPO Extension States: (EPO) EP AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU MC NL PL PT RO SE SI SK TR

----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

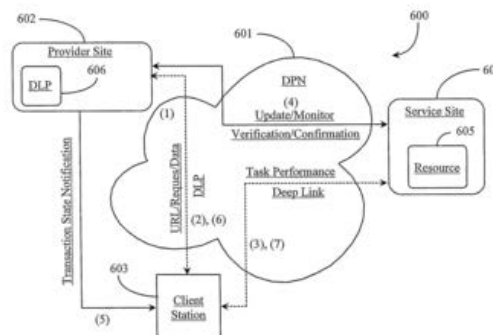
**Filing Language:** ENG

**Agent(s):** BOYS, Donald, R. P.O. Box 187, Aromas, CA 95004 US

**Date of Deferred Publication of Search Report:**

--20060622

**Legal Status:** There is no Legal Status information available for this patent



**WO2005065388A3 20060302**  
**WO2005065388A2 20050721**

**(ENG) METHOD AND APPARATUS FOR  
CONFIGURATING AND ESTABLISHING A SECURE  
CREDENTIAL-BASED NETWORK LINK BETWEEN A  
CLIENT AND A SERVICE OVER A  
DATA-PACKET-NETWORK**

[ no drawing available]

**Assignee:** YODLEE INC US

**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US  
; SATYAVOLU RAMAKRISHNA US

**Application No:** US 2004043973 W

**Filing Date:** 20041230

**Issue/Publication Date:** 20060302

**Abstract:** (ENG) A system for establishing a direct network connection between a first and a second node over a data-packet-network includes a third network node having connection to the data-packet-network for providing an electronic interface accessible to the first node; a navigation agent directed by the third network node for navigating over the network to the second node to gather information; and at least one machine-readable instruction containing the instruction for directing and implementing the direct network connection. The electronic interface may be a Web page providing bill consolidation and payment services to a client operating the first node and wherein the connection established via the instruction enables transparent login payment of a bill at the second node, which may be a direct billing party interface of the client registered and listed on the Web page.

**Priority Data:** US 53369603 20031231 P Y;

**Related Application(s):** 20060302 200609 3 R4

**IPC (International Class):** G06F01516

**ECLA (European Class):** H04L02906S8

**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD  
SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW ::: (ARIPO) AP BW  
GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM

----EPO Extension States: (EPO) EP AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT  
LU MC NL PL PT RO SE SI SK TR

----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** BOYS, Donald, R. P.O. Box 187, Aromas, CA 95004 US; BOYS, Donald, R. P.O. Box 187, Aromas,  
CA 95004 US; BOYS, Donald, R. P.O. Box 187, Aromas, CA 95004 US

**Date of Deferred Publication of Search Report:**

--20060302

**Legal Status:** There is no Legal Status information available for this patent



**WO2007064583A3 20090430**  
**WO2007064583A2 20070607**

**(ENG) CATEGORIZATION OF SUMMARIZED INFORMATION**

**Assignee:** YODLEE INC US

**Inventor(s):** SATYAVOLU RAMAKRISHNA US

**Application No:** US 2006045406 W

**Filing Date:** 20061122

**Issue/Publication Date:** 20090430

**Abstract:** (ENG) A system for categorizing transactions includes a collection function gathering information concerning transactions, including at least date, description and amount of the transactions, for a particular person or enterprise, and a processing function categorizing individual ones of the collected transactions according to at least part of the transaction description.

**Priority Data:** US 29335005 20051201 A Y;

**IPC (International Class):** G06Q09900

**ECLA (European Class):** G06F01730W1F

**Designated Countries:**

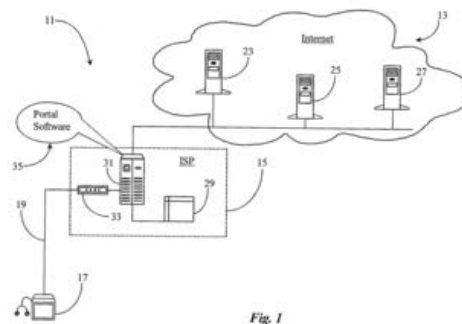
----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MY MZ NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW ::: (ARIPO) AP BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW  
 ----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM  
 ----EPO Extension States: (EPO) EP AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL PL PT RO SE SI SK TR  
 ----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** BOYS, Donald, R. 3 HANGAR WAY, SUITE D, Watsonville, CA 95076, US US

**Legal Status:** There is no Legal Status information available for this patent



**WO2007064584A3 20071004**  
**WO2007064584A2 20070607**

**(ENG) NETWORK-BASED VERIFICATION AND FRAUD  
PREVENTION SYSTEMS**

**Assignee:** YODLEE COM INC US

[ no drawing available]

**Inventor(s):** SATYAVOLU RAMAKRISHNA US

**Application No:** US 2006045408 W

**Filing Date:** 20061122

**Issue/Publication Date:** 20071004

**Abstract:** (ENG) A system and method authenticates a person requesting a service by soliciting an account identification from the person, using an automatic funds transfer protocol and the account identification to make a deposit in the account, entering a unique code in a field of the protocol that is retrievable from the account after the deposit is made, soliciting from the person, after the deposit has been made, the code entered into the field of the protocol, and matching the code returned by the person with the code entered into the field to make the deposit, a successful match authenticating the person. Transactions are also triggered by conditions in monitored accounts.

**Priority Data:** US 29333005 20051201 A Y;

**IPC (International Class):** G06F01516

**ECLA (European Class):** G06F02100N5A2S; G06F02100N5A2V; G06Q04000A

**Designated Countries:**

----Designated States: (national) AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM  
KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MY MZ NA NG NI NO  
NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT TZ UA UG US UZ  
VC VN ZA ZM ZW ::: (ARIPO) AP BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW  
----Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM  
----EPO Extension States: (EPO) EP AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT  
LU LV MC NL PL PT RO SE SI SK TR  
----Elected States (PCT): (OAPI) OA BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** BOYS, Donald, R. 3 HANGAR WAY, SUITE D, Watsonville, CA 95076, US US

**Legal Status:** There is no Legal Status information available for this patent

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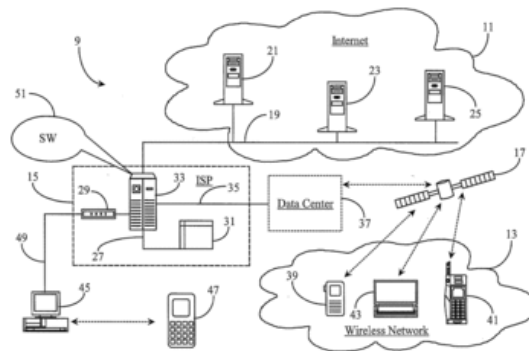


**US2009006582A1 20090101****(ENG) Method and Apparatus for Restructuring of Personalized Data for Transmission from a Data Network to Connected and Portable Network Appliances****Assignee:** YODLEE COM US**Inventor(s):** DASWANI NEIL US ; INALA SUMAN KUMAR US ; SATYAVOLU RAMAKRISHNA US ; RANGAN P VENKAT US ; RAJAN SREERANGA P US**Application No:** US 20624208 A**Filing Date:** 20080908**Issue/Publication Date:** 20090101

**Abstract:** (ENG) A system for retrieving and disseminating information records from Internet sources includes a client device and an intermediary server system, including software, between the client device and the Internet. The system collects a record specific to a client from an individual one of said Internet sources in a first form in which the record is recorded at the Internet source, transforms the record from the first form to a second form specific to an application other than an Internet browser application, the application executable by the client device, and transmits the transformed record to the client device for display in the application other than an Internet browser application executable by the client device. In some cases the client device connects by a data link that is not Internet-compatible link. Data mining on the Internet specific to clients and client devices is taught, with aggregation services and synchronization for keeping a client up-to-date efficiently for changing data content.

**Priority Data:** US 20624208 20080908 A N; US 84602907 20070828 A 1 N; US 28791102 20021104 A 1 N; US 39832099 19990916 A 1 Y;

**Related Application(s):** 11/846029 20070828 7424520 US; 10/287911 20021104 7263548 US; 09/398320 19990916 6477565 US

**IPC (International Class):** G06F01516; G06F01730; G06Q03000**ECLA (European Class):** G06F01730W9V; G06Q03000A**US Class:** 709219**Publication Language:** ENG**Filing Language:** ENG**Legal Status:** There is no Legal Status information available for this patent

**US6412073B1 20020625**  
**US2002032782A1 20020314**

**(ENG) Method and apparatus for providing and maintaining a user-interactive portal system accessible via internet or other switched-packet-network**

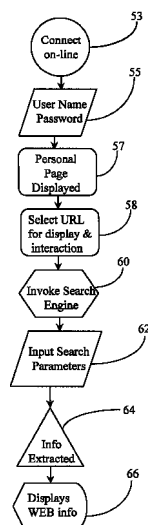
**Assignee:** YODLEE INC

**Inventor(s):** RANGAN P VENKAT US

**Application No:** US 20874098 A

**Filing Date:** 19981208

**Issue/Publication Date:** 20020625



**Abstract:** (ENG) An Internet Portal is enabled by software executing on an Internet-connected server. The Portal, in response to a log-on by a user, presents a secure and personalized page for and to the user, the personalized page having listed plural Internet destinations enabled by hyperlinks, wherein upon invocation of a hyperlink by the subscriber, such as by a point-and-click technique, the portal invokes a URL for the destination, and upon connection with the destination, transparently provides any required log-on information for user access at the destination. In an enhanced embodiment a search function is provided wherein a user may configure searches in any or all of the listed destinations on a personalized page. Provision is provided for log-on by limited appliances, such as by a Smartcard or embedded password, and in some embodiments functionality is provided in a browser plug-in wherein a user may navigate to a site, and, in response to a request for log-in data, the subscriber may use a hot key or pointer input, which will cause the browser to access and provide the needed data from the Password-All source.

**Priority Data:** US 20874098 19981208 A Y;

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F02100N5A2S

**US Class:** 726005; 705014; 705076; 707E17109; 707E17116; 713162

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Wright, Norman M.

**US Post Issuance:**

--US Certificate of Correction: 20030805 20030826 a Certificate of Correction was issued for this patent

--US Litigations: Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 5:05cv2554 ; Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 3:05cv2554 ; Cashedge, Inc Cashedge, Inc 20060731 N.D. California 3:06cv4648

**Assignments Reported to USPTO:**

**Reel/Frame:** 10069/0383 **Date Signed:** 19990610 **Date Recorded:** 19990701

**Assignee:** YODLEE.COM, INC. A CORPORATION OF CALIFORNIA 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086



**Assignor:** RANGAN, VENKAT P.

**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS,  
CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
19990701	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RANGAN, VENKAT P.;REEL/FRA
20030805	()	CC	FRAME:010069/0383; Effective date: 19990610; CERTIFICATE OF CORRECTION

**US7558795B2 20090707**  
**US2005114353A1 20050526**

**(ENG) Method and apparatus for tracking functional states of a Web-site and reporting results to web developers**

**Assignee:** YODLEC COM INC US

**Inventor(s):** MALIK MASROOR US ; AKUNURI NAVEEN VENKATA US ; KERN CHRISTOPH US ; ARMANDPOUR TIM US ; KHAVARI SAM US ; NARASIMHAN GANESH US

**Application No:** US 2387604 A

**Filing Date:** 20041227

**Issue/Publication Date:** 20090707

**Abstract:** (ENG) A software tool is provided that accomplishes automated tracking of activity related to the status and usage statistics of a plurality of Web sites on a data packet network. The tool provides to software engineers status and usage for the purpose of creating routines enabling automated navigation and site manipulation by proxy for subscribed users.

**Priority Data:** US 2387604 20041227 A N; US 63934600 20000815 A 1 Y; US 57369900 20000519 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 11/023876 20041227 20050114353 20050526 US; 09/639346 20000815 6842782 US; 09/573699 20000519 US ABANDONED; 09/208740 19981208 6412073 20020625 US

**IPC (International Class):** G06F01730; G06F02100; H04L02908

**ECLA (European Class):** G06F01730W7; G06F02100N5A2S

**US Class:** 707010; 707102

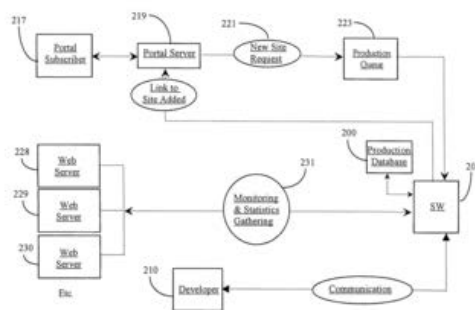
**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc

**Examiner Primary:** Mizrahi, Diane

**Legal Status:** There is no Legal Status information available for this patent



**US2005198377A1 20050908**

**(ENG) Method and system for verifying state of a transaction between a client and a service over a data-packet-network**

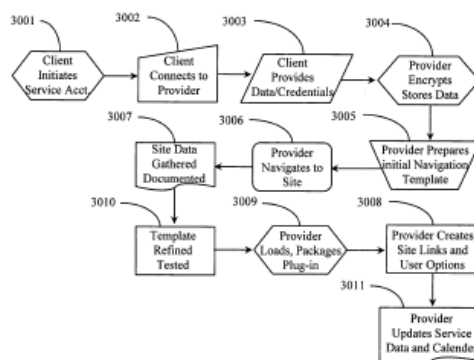
**Assignee:** FERGUSON HILL US

**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US ; SATYAVOLU RAMAKRISHNA US

**Application No:** US 2766904 A

**Filing Date:** 20041229

**Issue/Publication Date:** 20050908



**Abstract:** (ENG) A system for verifying communication established between a first and a second node over a data-packet-network includes a third network node accessible from the first node over the data-packet-network, the third node containing network location information of the second node and the network location information of at least one resource accessible there from; and a navigation agent directed by the third network node for navigating over the network to the second node and to the at least one resource to gather information. In a preferred embodiment, the information gathered includes indication of receipt of data sent from the first node at the second node and indication of confirmation or authorization to access services.

**Priority Data:** US 2766904 20041229 A Z; US 32359899 19990601 A 3; US 53369203 20031231 P; US 73740400 20001214 A 2;

**Related Application(s):** 09/737404 20001214 09/323598 19990601 6199077 US GRANTED; 60/533692 20031231; 11/027669 20041229 09/737404 20001214 PENDING

**IPC (International Class):** G06F015173; G06F01516

**US Class:** 709238; 709232

**Publication Language:** ENG

**Assignments Reported to USPTO:**

**Reel/Frame:** 16273/0714 **Date Signed:** 20050105 **Date Recorded:** 20050524

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD CITY CALIFORNIA 94065

**Assignor:** FERGUSON, HILL

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CALIFORNIA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20050524	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FERGUSON, HILL;HAYWARD, BLAKE;SATYAVOLU, RAMAKRISHNA;REEL/FRAME:016273/0714;SIGNING DATES FROM 20050105 TO 20050512;
20050524	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FERGUSON, HILL;HAYWARD,



20050524 ( ) AS

BLAKE;SATYAVOLU,  
 RAMAKRISHNA;REEL/FRAME:016273/0714;SIGNING  
 DATES FROM 20050105 TO 20050512;  
 New owner name: YODLEE.COM, INC., CALIFORNIA; :  
 ASSIGNMENT OF ASSIGNORS  
 INTEREST;ASSIGNORS:FERGUSON, HILL;HAYWARD,  
 BLAKE;SATYAVOLU,  
 RAMAKRISHNA;REEL/FRAME:016273/0714;SIGNING  
 DATES FROM 20050105 TO 20050512;

**US7729283B2 20100601**  
**US2005216824A1 20050929**

**(ENG) Method and apparatus for configuring and establishing a secure credential-based network link between a client and a service over a data-packet-network**

**Assignee:** YODLEE INC US

**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US  
 ; SATYAVOLU RAMAKRISHNA US

**Application No:** US 2772404 A

**Filing Date:** 20041230

**Issue/Publication Date:** 20100601

**Abstract:** (ENG) A system for establishing a direct network connection between a first and a second node over a data-packet-network includes a third network node having connection to the data-packet-network for providing an electronic interface accessible to the first node; a navigation agent directed by the third network node for navigating over the network to the second node to gather information; and at least one machine-readable instruction containing the instruction for directing and implementing the direct network connection. The electronic interface may be a Web page providing bill consolidation and payment services to a client operating the first node and wherein the connection established via the instruction enables transparent login payment of a bill at the second node, which may be a direct billing party interface of the client registered and listed on the Web page.

**Priority Data:** US 2772404 20041230 A N; US 73740400 20001214 A 2 Y; US 32359899 19990601 A 3 Y; US 53369603 20031231 P Y;

**Related Application(s):** 11/027724 20041230 20050216824 US; 60/533696 20031231 US; 09/737404 20001214 US ABANDONED; 09/323598 19990601 6199077 US

**IPC (International Class):** H04L01228; G06F02100; H04L02906; G06F01721; H04L02908; G06F01516; G06Q02000; G06F01130; G06Q03000

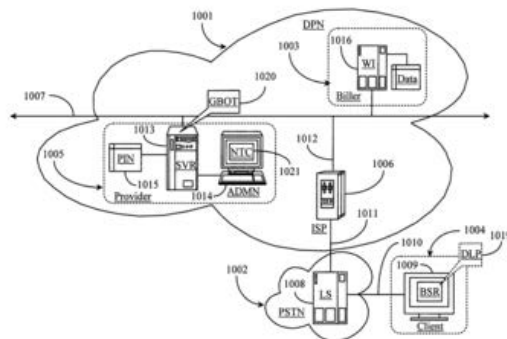
**ECLA (European Class):** G06Q02000K3B; G06F02100N5A2; G06F02100N5A2S; G06Q03000B; H04L02906S8D; H04L02908N1A; H04L02908N13

**US Class:** 370254; 370252; 707501; 705040

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.



**Examiner Primary:** Wilson, Robert W

**Assignments Reported to USPTO:**

**Reel/Frame:** 16273/0724 **Date Signed:** 20050105 **Date Recorded:** 20050524  
**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD CITY CALIFORNIA 94065

**Assignor:** FERGUSON, HILL; HAYWARD, BLAKE; SATYAVOLU, RAMAKRISHNA

**Corres. Addr:** DONALD R.BOYS P.O. BOX 187 AROMAS, CALIFORNIA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20050524	()	AS	New owner name: YODLEE.COM, INC.,CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FERGUSON, HILL;HAYWARD, BLAKE;SATYAVOLU, RAMAKRISHNA;SIGNED BETWEEN 20050105 AND 20050512;REEL/FRA:16273/724;

**US7263548B2 20070828**  
**US2003061307A1 20030327**

**(ENG) Method and apparatus for restructuring of personalized data for transmission from a data network to connected and portable network appliances**

**Assignee:** YODLEE COM US

**Inventor(s):** DASWANI NEIL US ; INALA SUMAN KUMAR US ; SATYAVOLU RAMAKRISHNA US ; RANGAN P VENKAT US ; RAJAN SREERANGA P US

**Application No:** US 28791102 A

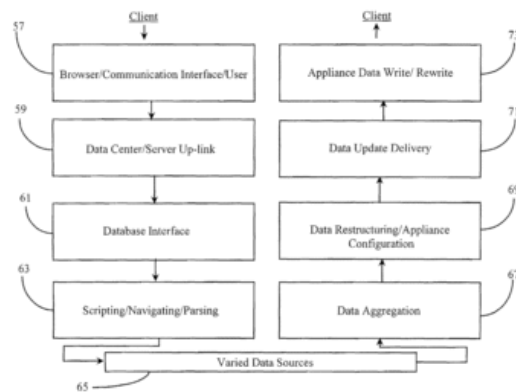
**Filing Date:** 20021104

**Issue/Publication Date:** 20070828

**Abstract:** (ENG) A system for retrieving and disseminating information records from Internet sources includes a client device and an intermediary server system, including software, between the client device and the Internet. The system collects a record specific to a client from an individual one of said Internet sources in a first form in which the record is recorded at the Internet source, transforms the record from the first form to a second form specific to an application other than an Internet browser application, the application executable by the client device, and transmits the transformed record to the client device for display in the application other than an Internet browser application executable by the client device. In some cases the client device connects by a data link that is not Internet-compatible link. Data mining on the Internet specific to clients and client devices is taught, with aggregation services and synchronization for keeping a client up-to-date efficiently for changing data content.

**Priority Data:** US 28791102 20021104 A N; US 39832099 19990916 A 1 Y;

**Related Application(s):** 10/287911 20021104 20030061307 20030327 US; 09/398320 19990916 6477565 US



**IPC (International Class):** G06F01516; G06Q03000; G06F01730

**ECLA (European Class):** G06F01730W9V; G06Q03000A

**US Class:** 709217; 707E17121; 709246; 709250

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Donaghul, Larry D.

**Legal Status:** There is no Legal Status information available for this patent

## US2006136595A1 20060622

**(ENG) Network-based verification and fraud-prevention system**

**Assignee:** SATYAVOLU RAMAKRISHNA

**Inventor(s):** SATYAVOLU RAMAKRISHNA US

**Application No:** US 29333005 A

**Filing Date:** 20051201

**Issue/Publication Date:** 20060622

**Abstract:** (ENG) A system and method authenticates a person requesting a service by soliciting an account identification from the person, using an automatic funds transfer protocol and the account identification to make a deposit in the account, entering a unique code in a field of the protocol that is retrievable from the account after the deposit is made, soliciting from the person, after the deposit has been made, the code entered into the field of the protocol, and matching the code returned by the person with the code entered into the field to make the deposit, a successful match authenticating the person. Transactions are also triggered by conditions in monitored accounts.

**Priority Data:** US 29333005 20051201 A N; US 66158900 20000914 A 2 N; US 46151599 19991214 A C Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 11/293330 20051201 09/661589 20000914 PENDING<RDA continuation-in-part>  
09/661589 20000914 09/461515 19991214 ABANDONED 09/461515 19991214  
09/425626 19991022 6802042 US GRANTED 09/425626 19991022 09/323598  
19990601 6199077 US GRANTED 09/323598 19990601 09/208740 19981208  
6412073 US GRANTED

**IPC (International Class):** G06F01516

**ECLA (European Class):** H04L02906S8

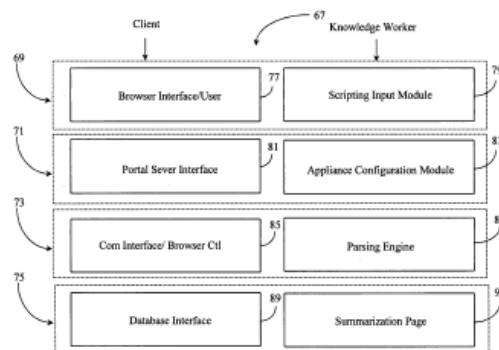
**US Class:** 709229

**Publication Language:** ENG

**Assignments Reported to USPTO:**

**Reel/Frame:** 16981/0679 **Date Signed:** 20060104 **Date Recorded:** 20060106

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY SUITE 200 REDWOOD CITY CALIFORNIA 94065





**Assignor:** SATYAVOLU, RAMAKRISHNA

**Corres. Addr:** CENTRAL COAST PATENT AGENCY, INC. P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20060106	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SATYAVOLU, RAMAKRISHNA;REEL/FRAME:016981/0679; Effective date: 20060104;
20060106	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SATYAVOLU, RAMAKRISHNA;REEL/FRAME:016981/0679; Effective date: 20060104;
20060106	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:SATYAVOLU, RAMAKRISHNA;REEL/FRAME:016981/0679; Effective date: 20060104;

**US7752535B2 20100706**  
**US2006101323A1 20060511**

**(ENG) Categorization of summarized information**

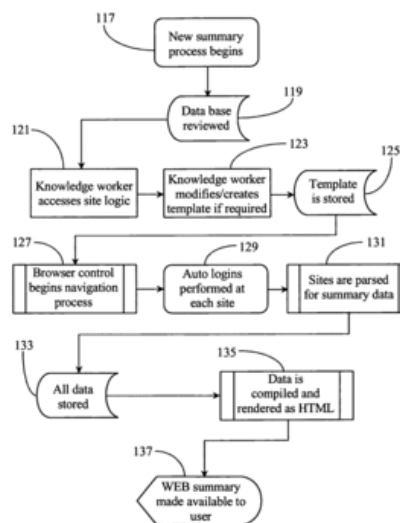
**Assignee:** YODLEC COM INC US

**Inventor(s):** SATYAVOLU RAMAKRISHNA US

**Application No:** US 29335005 A

**Filing Date:** 20051201

**Issue/Publication Date:** 20100706



**Abstract:** (ENG) A system for categorizing transactions includes a collection function gathering information concerning transactions, including at least date, description and amount of the transactions, for a particular person or enterprise, and a processing function categorizing individual ones of the collected transactions according to at least part of the transaction description. In preferred embodiments of the system a variety of categorization methods for collected information may be utilized including at least categorizing by providing individual categories according to category definition entered by a specific user or on behalf of an enterprise. Categorization may also be done for a first plurality of persons or enterprises according to category definition entered by a second plurality of persons or enterprises, or categories are developed from information taken from communication between users and the system. Probability algorithms may also be used in developing categories.





**Priority Data:** US 29335005 20051201 A N; US 73740400 20001214 A 2 Y; US 32359899 19990601 A 3 Y;

**Related Application(s):** 11/293350 20051201 20060101323 US; 09/737404 20001214 US ABANDONED;  
09/323598 19990601 6199077 US

**IPC (International Class):** G06F01700; G06F01730; G06F01516

**ECLA (European Class):** G06F01730W7L; G06Q03000C; H04L02908N27

**US Class:** 715205; 715234; 715273; 707001; 707007; 709203; 705035

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Ries, Laurie

**Examiner Assistant:** Nguyen, Maikhanh

**Assignments Reported to USPTO:**

**Reel/Frame:** 16981/0775 **Date Signed:** 20060104 **Date Recorded:** 20060106

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY SUITE 200 REDWOOD CITY CALIFORNIA  
94065

**Assignor:** SATYAVOLU, RAMAKRISHNA

**Corres. Addr:** CENTRALCOAST PATENT AGENCY, INC. P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20060106	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: SATYAVOLU, RAMAKRISHNA; REEL/FRAME: 16981/775; Effective date: 20060104;



**US6199077B1 20010306****(ENG) Server-side web summary generation and presentation****Assignee:** YODLEE INC US**Inventor(s):** INALA SUMAN KUMAR US ; RANGAN P VENKAT US ; SATYAVOLU RAMAKRISHNA US ; RAJAN SREERANGA PRASANNAKUMAR US**Application No:** US 32359899 A**Filing Date:** 19990601**Issue/Publication Date:** 20010306

**Abstract:** (ENG) A portal server includes a software agent configured to do summary searches for subscribers based on Internet destinations provided by the subscribers, to retrieve information from such destinations based on pre-programmed site information, and to download the summary information to the subscriber. The destinations and the nature of the information to be retrieved is pre-programmed. There is further a configuration and initiation interface for a subscriber to set up and start a summary search. In some cases the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server. Also in some cases retrieved information is immediately sent to the subscriber, and in other situations such information is saved at the portal to be retrieved by a subscriber at a later time. In preferred embodiments of the invention autologins are accomplished for a subscriber at Internet destinations by use of pre-stored configuration information.

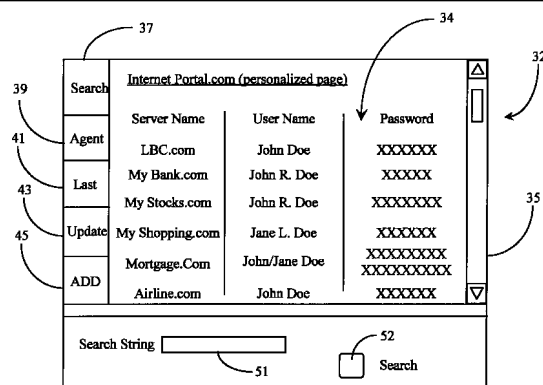
**Priority Data:** US 32359899 19990601 A N; US 20874098 19981208 A 2 Y;**Related Application(s):** 09/208740 19981208 US PENDING**IPC (International Class):** G06F02100; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F02100N5A2S**US Class:** 715201; 704001; 707E17109; 707E17116; 709202; 709218; 715200; 715215; 726005**Publication Language:** ENG**Filing Language:** ENG**Agent(s):** Boys, Donald R.; Central Coast Patent Agency**Examiner Primary:** Feild, Joseph H.**US Post Issuance:**

--US Certificate of Correction: 20030218 20030311 a Certificate of Correction was issued for this patent

--US Litigations: Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 5:05cv2554 ; Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 3:05cv2554 ; Cashedge, Inc Cashedge, Inc 20060731 N.D. California 3:06cv4648

**Assignments Reported to USPTO:****Reel/Frame:** 10069/0386 **Date Signed:** 19990616 **Date Recorded:** 19990701**Assignee:** YODLEE.COM, INC. 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086**Assignor:** INALA, SUMAN KUMAR; RANGAN, VENKAT P.; SATYAVOLU, RAMAKRISHNA**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Reel/Frame:** 11538/0960 **Date Signed:** 20010206 **Date Recorded:** 20010213

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES  
CALIFORNIA 94065

**Assignor:** RAJAN, SREERANGA PRASANNAKUMAR

**Corres. Addr:** BOYS, DONALD R. P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

<b>Date</b>	<b>+/-</b>	<b>Code</b>	<b>Description</b>
19990701	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:INALA, SUMAN KUMAR;RANGAN, VENKAT P.;SATYAVOLU, RAMAKRISHNA;REEL/FRAME:010069/0386;SIGNING DATES FROM 19990616 TO 19990622;
20010213	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR RE; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RAJAN, SREERANGA PRASANNAKUMAR;REEL/FRAME:011538/0960; Effective date: 20010206;
20010213	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR RED; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RAJAN, SREERANGA PRASANNAKUMAR /AR;REEL/FRAME:011538/0960; Effective date: 20010206;
20010213	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RAJAN, SREERANGA PRASANNAKUMAR;REEL/FRAME:011538/0960; Effective date: 20010206;
20010213	( )	AS	New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR RE; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RAJAN, SREERANGA PRASANNAKUMAR;REEL/FRAME:011538/0960; Effective date: 20010206;
20010213	( )	AS	New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR RED; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:RAJAN, SREERANGA PRASANNAKUMAR /AR;REEL/FRAME:011538/0960; Effective date: 20010206;
20030218	( )	CC	CERTIFICATE OF CORRECTION



**US2003120774A1 20030626**

**(ENG) Networked architecture for enabling automated gathering of information from WEB servers**

**Inventor(s):** SATYAVOLU RAMAKRISHNA US ; INALA SUMAN KUMAR US ; RANGAN P VENKAT US

[ no drawing available]

**Application No:** US 36033703 A

**Filing Date:** 20030207

**Issue/Publication Date:** 20030626

**Abstract:** (ENG) A data-gathering and reporting system for collecting WEB summaries from the Internet for individual subscribers to a Portal subscription system has a plurality of gatherer servers each connected to the Internet, to an ascending hierarchy of work request distribution servers, and to a ascending hierarchy of collector servers. A work request generator at the top of the hierarchy of distribution servers generates work requests for collecting WEB summaries, and a filer server at the top of the hierarchy of collector servers writes data to a database. Work flow is by work requests from the work request generator down the hierarchy of distributor servers to the gatherer servers, where work requests are accomplished by gathering WEB summaries from Internet servers according to the work requests, and by data collected from the gatherer servers up the hierarchy of collector servers to the filing server.

**Priority Data:** US 36033703 20030207 A N; US 36291499 19990727 A 3 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 10/360337 20030207 09/362914 19990727 6517587 US GRANTED; 10/360337 20030207 09/323598 19990601 6199077 US GRANTED<RDA continuation-in-part> 09/323598 19990601 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** G06F01730W1F; G06F01730W3; G06F01730W7; G06F01730W9; G06F02100N5A2S

**US Class:** 709224; 709203

**Legal Status:** There is no Legal Status information available for this patent

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**US6517587B2 20030211**  
**US2002023104A1 20020221**

**(ENG) Networked architecture for enabling automated gathering of information from Web servers**

**Assignee:** YODLEE COM INC US

**Inventor(s):** SATYAVOLU RAMAKRISHNA US ; INALA SUMAN KUMAR US ; RANGAN P VENKAT US

**Application No:** US 36291499 A

**Filing Date:** 19990727

**Issue/Publication Date:** 20030211

**Abstract:** (ENG) A data-gathering and reporting system for collecting WEB summaries from the Internet for individual subscribers to a Portal subscription system has a plurality of gatherer servers each connected to the Internet, to an ascending hierarchy of work request distribution servers, and to a ascending hierarchy of collector servers. A work request generator at the top of the hierarchy of distribution servers generates work requests for collecting WEB summaries, and a filer server at the top of the hierarchy of collector servers writes data to a database. Work flow is by work requests from the work request generator down the hierarchy of distributor servers to the gatherer servers, where work requests are accomplished by gathering WEB summaries from Internet servers according to the work requests, and by data collected from the gatherer servers up the hierarchy of collector servers to the filing server.

**Priority Data:** US 36291499 19990727 A N; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906C2; H04L02908N1

**US Class:** 715234; 707003; 707005; 707E17109; 707E17116; 707E17119; 709219; 709238; 715254

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Feild, Joseph H.

**Examiner Assistant:** Bashore, William L.

**Assignments Reported to USPTO:**

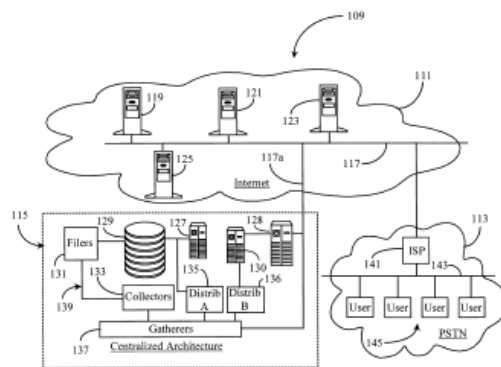
**Reel/Frame:** 11214/0599 **Date Signed:** 20001004 **Date Recorded:** 20001031

**Assignee:** YODLEE.COM, INC. 2ND FLOOR 3600 BRIDGE PARKWAY REDWOOD SHORES CALIFORNIA 94065

**Assignor:** SATYAVOLU, RAMAKRISHNA; INALA, SUMAN KUMAR; RANGAN, P. VENKAT

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).



**Legal Status:**

Date	+/-	Code	Description
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20001031	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC. 2ND FLOOR 3600 BRIDGE PARKWAY RED; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SATYAVOLU, RAMAKRISHNA;INALA, SUMAN KUMAR;RANGAN, P. VENKAT;REEL/FRAME:011214/0599; Effective date: 20001004;
20001031	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SATYAVOLU, RAMAKRISHNA;INALA, SUMAN KUMAR;RANGAN, P. VENKAT;REEL/FRAME:011214/0599; Effective date: 20001004;
20001031	( )	AS	New owner name: YODLEE.COM, INC. 2ND FLOOR 3600 BRIDGE PARKWAY RED; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SATYAVOLU, RAMAKRISHNA;INALA, SUMAN KUMAR;RANGAN, P. VENKAT;REEL/FRAME:011214/0599; Effective date: 20001004;

## US6477565B1 20021105

**(ENG) Method and apparatus for restructuring of personalized data for transmission from a data network to connected and portable network appliances**

**Assignee:** YODLEE INC US

**Inventor(s):** DASWANI NEIL US ; INALA SUMAN KUMAR US ; SATYAVOLU RAMAKRISHNA US ; RANGAN P VENKAT US ; RAJAN SREERANGA P US

**Application No:** US 39832099 A

**Filing Date:** 19990916

**Issue/Publication Date:** 20021105

**Abstract:** (ENG) A system for retrieving and disseminating information records from Internet sources includes a client device and an intermediary server system, including software, between the client device and the Internet. The system collects a record specific to a client from an individual one of said Internet sources in a first form in which the record is recorded at the Internet source, transforms the record from the first form to a second form specific to an application other than an Internet browser application, the application executable by the client device, and transmits the transformed record to the client device for display in the application other than an Internet browser application executable by the client device. In some cases the client device connects by a data link that is not Internet-compatible link. Data mining on the Internet specific to clients and client devices is taught, with aggregation services and synchronization for keeping a client up-to-date efficiently for changing data content.

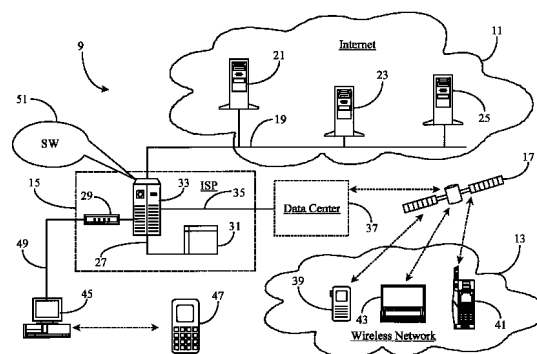
**Priority Data:** US 39832099 19990916 A Y; US 32359899 19990601 A 2 Y;

**Related Application(s):** 09/323598 19990601 6199077 US GRANTED

**IPC (International Class):** G06F01500; G06F01300; G06F01200; G06F01730; H04L02908

**ECLA (European Class):** G06F01730W1F; G06F01730W9; H04L02908N27I

**US Class:** 709217; 707E17109; 707E17119; 709246; 709250



**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Maung, Zarni

**Assignments Reported to USPTO:**

**Reel/Frame:** 11172/0554 **Date Signed:** 19990915 **Date Recorded:** 20001011

**Assignee:** YODLEE.COM 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086

**Assignor:** DASWANI, NEIL; INALA, SUMAN KUMAR; RAJAN, SREERANGA P.; RANGAN, P. VENKAT; SATYAVOLU, R  
VENKAT; SATYAVOLU, RAMAKRISHNA

**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS,  
CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

<b>Date</b>	<b>+/-</b>	<b>Code</b>	<b>Description</b>
20001011	( )	AS	ASSIGNMENT New owner name: YODLEE.COM 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIF; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DASWANI, NEIL;INALA, SUMAN KUMAR;SATYAVOLU, RAMAKRISHNA;AND OTHERS;REEL/FRAME:011172/0554; Effective date: 19990915;
20001011	( )	AS	New owner name: YODLEE.COM, CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DASWANI, NEIL;INALA, SUMAN KUMAR;SATYAVOLU, RAMAKRISHNA;AND OTHERS;REEL/FRAME:011172/0554; Effective date: 19990915;
20001011	( )	AS	New owner name: YODLEE.COM 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIF; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DASWANI, NEIL;INALA, SUMAN KUMAR;SATYAVOLU, RAMAKRISHNA;AND OTHERS;REEL/FRAME:011172/0554; Effective date: 19990915;



**US6802042B2 20041005**  
**US2002078079A1 20020620**

**(ENG) Method and apparatus for providing calculated and solution-oriented personalized summary-reports to a user through a single user-interface**

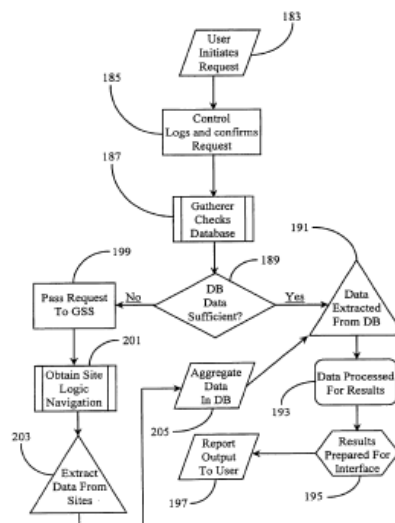
**Assignee:** YODLEE INC US

**Inventor(s):** RANGAN P VENKAT US ; SHARMA MANOJ US ; RAJAN SREERANGA P US ; WU JONATHAN US

**Application No:** US 42562699 A

**Filing Date:** 19991022

**Issue/Publication Date:** 20041005



**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 42562699 19991022 A N; US 32359899 19990601 A 2 Y;

**Related Application(s):** 09/323598 19990601 US PENDING

**IPC (International Class):** G06F01500; G06F01300; G06F01200; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W9

**US Class:** 715200; 707005; 707E17109; 707E17119; 709217; 715201; 715215

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Hong, Stephen S.

**Examiner Assistant:** Huynh, Cong Lac

**US Post Issuance:**

--US Litigations: Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 5:05cv2554 ; Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 3:05cv2554 ; Cashedge, Inc Cashedge, Inc 20060731 N.D. California  
 3:06cv4648

**Assignments Reported to USPTO:**





**Reel/Frame:** 11109/0336 **Date Signed:** 19991019 **Date Recorded:** 20000919  
**Assignee:** YODLEE.COM, INC. 595 LAWRENCE EXPRESSWAY SUNNVYALE CALIFORNIA 94086  
**Assignor:** RANGAN, P. VENKAT; RAJAN, SREERANGA P.; WU, JONATHAN; SHARMA, MANOJ  
**Corres. Addr:** BOYS, DONALD R. CENTRAL COAST PATENT AGENCY P.O. BOX 187 AROMAS, CA 95004  
**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20000919	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RANGAN, P. VENKAT;RAJAN, SREERANGA P.;WU, JONATHAN;AND OTHERS;REEL/FRAME:011109/0336;SIGNING DATES FROM 19991019 TO 19991020;

**US2003191832A1 20031009**

**(ENG) Method and apparatus for controlled establishment of a turnkey system providing a centralized data aggregation and summary capability to third party entities**

**Inventor(s):** SATYAVOLU RAMAKRISHNA US ; SANKURATRIPATI SUBHASH US ; PUDHUKOTTAI SAMPATHKUMAR RANGA US ; TSAI SIN-MEI US

**Application No:** US 43543003 A

**Filing Date:** 20030509

**Issue/Publication Date:** 20031009

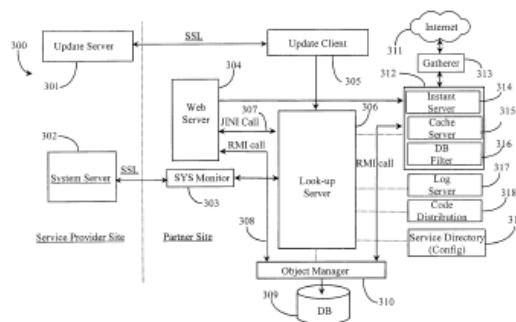
**Abstract:** (ENG) A distributable software system is disclosed for collecting and aggregating data from a network and for providing compartmentalized and optimized data summaries to third parties. The system includes a data gathering layer for gathering the data; a data normalization layer for normalizing data types from multiple data sources; a data cleansing layer for correcting data inconsistencies; a data enrichment layer for rendering data analyzable; and an application interface layer for providing multiple interfaces to like multiple user applications. An enterprise utilizes the system to provide data aggregation and summary services to clients. In preferred embodiments, intelligence created from the activity is harnessed to provide and improve services and to enhance profitability of the enterprise.

**Priority Data:** US 43543003 20030509 A N; US 10429602 20020322 A 2 Y; US 36291499 19990727 A 2 Y; US 32359899 19990601 A 2 Y; US 27850201 20010323 P Y;

**Related Application(s):** 60/278502 20010323; 10/435430 20030509 10/104296 20020322 PENDING<RDA continuation-in-part> 10/435430 20030509 09/362914 19990727 6517587 US GRANTED 09/362914 19990727 09/323598 19990601 6199077 US GRANTED

**IPC (International Class):** G06F015173; G06F00900

**ECLA (European Class):** G06F01730N; G06F01730B; G06F01730S4P4P1A



**US Class:** 709223; 719328

**Legal Status:** There is no Legal Status information available for this patent

**US2006230343A1 20061012**

**(ENG) Method and apparatus for detecting changes in websites and reporting results to web developers for navigation template repair purposes**

**Assignee:** YODLEE COM INC US

**Inventor(s):** ARMANDPOUR TIM US ; MALIK MASROOR US

**Application No:** US 45093006 A

**Filing Date:** 20060608

**Issue/Publication Date:** 20061012

**Abstract:** (ENG) A software application for enabling automated notification of applied structural changes to electronic information pages hosted on a data packet network is provided. The software application comprises, a developer-interface module for enabling developers to build and modify navigation templates using functional logic blocks, a navigation system-interface module for integrating the software application to a proxy-navigation system for periodic execution of the templates, a change-notification module for indicating a point in process where a navigation routine has failed and for creating a data file containing parameters associated with the failed navigation routine and a database interface module for interfacing the software application to a data repository for storing the data file. The software application periodically submits test navigation and interaction routines to the navigation system for execution by virtue of the interface with the navigation system. Upon failure of a test routine, the software application creates the data file. The data file, comprises a point-of-failure indication within the failed navigation routine, an identifier of the associated electronic information page subjected to the navigation routine, and a brief description of the cause of failure. The software application stores the data file in the data repository sending notification of the action to the developer.

**Priority Data:** US 45093006 20060608 A N; US 65653100 20000907 A 3 N; US 63934600 20000815 A 2 Y; US 57369900 20000519 A C Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/656531 20000907 US PENDING; 09/639346 20000815 6842782 US GRANTED; 09/573699 20000519 US ABANDONED; 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** G06F01700; G06F02100; G06F01730; H04L02908

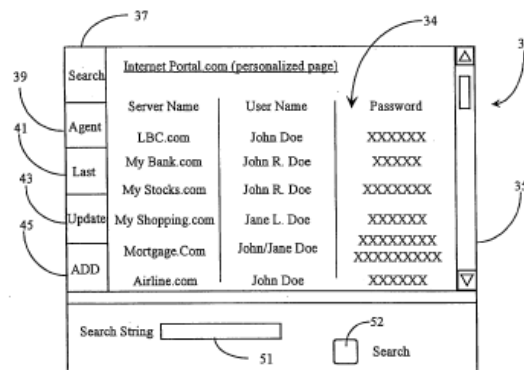
**ECLA (European Class):** G06F01730W7; G06F02100N5A2S

**US Class:** 715205; 707E17116

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent



**US2006253463A1 20061109****(ENG) Network-Based Bookmark Management and Web-Summary System****Assignee:** YODLEE COM A CORP OF CALIFORNI US**Inventor(s):** WU JONATHAN US ; RAJAN SREERANGA P US**Application No:** US 45727006 A**Filing Date:** 20060713**Issue/Publication Date:** 20061109

**Abstract:** (ENG) A network-based URL management and data gathering system is provided. The system utilizes a client-side utility for capturing URLs during normal Web browsing, and a server-side utility for organizing and managing the captured URLs on the network. The server-side utility periodically sends a request to a proxy browsing and data gathering utility for navigating to and retrieving data from Web pages associated with the captured URLs. Data retrieved from the Web pages is returned in summary form for presentation to subscribing users. In preferred embodiments, the system is practiced on the Internet network between users operating an Internet-capable appliance having an Internet connection, and an Internet portal service.

**Priority Data:** US 45727006 20060713 A N; US 57549100 20000518 A 1 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y; US 55034800 20000414 A 2 Y;

**Related Application(s):** 09/575491 20000518 7085997 US GRANTED; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED; 09/550348 20000414 US PENDING

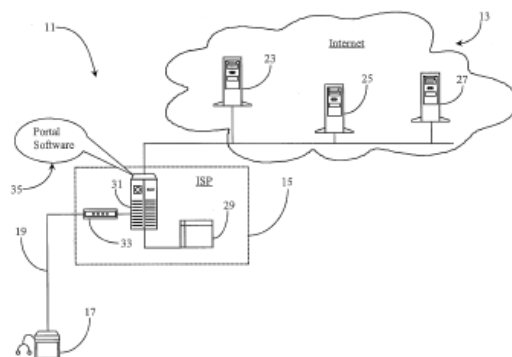
**IPC (International Class):** G06F01730; H04L02908; H04L02906; H04L00900

**US Class:** 707010; 707E17114

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent



**US6633910B1 20031014**

**(ENG) Method and apparatus for enabling real time monitoring and notification of data updates for WEB-based data synchronization services**

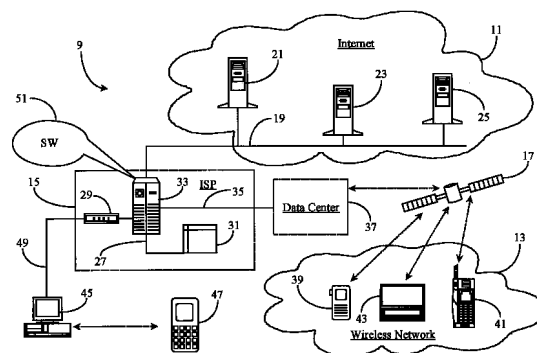
**Assignee:** YODLEE COM INC US

**Inventor(s):** SREERANGA RAJAN P US ; WU JONATHAN US

**Application No:** US 46150599 A

**Filing Date:** 19991214

**Issue/Publication Date:** 20031014



**Abstract:** (ENG) An Internet subscription system for alerting subscribers to changes in data maintained at Internet sites has an input interface for a subscriber to specify a data condition to be monitored and a condition for notification and a gatherer for gathering data changes from one or more Internet sites. A guard compares data changes with the condition for notification, and a notification alert system notifies the subscriber of a change that meets the condition for notification. The system is particularly suited to notification requirements regarding metadata changes over multiple sources. Users can configure the system to many different frequencies and many different data and notification conditions. Alerts may be made to many different devices in different ways as well, and may or may not include specific data.</PTEXT>

**Priority Data:** US 39832099 19990916 A 2; US 46150599 19991214 A Z;

**Related Application(s):** 01 01

**IPC (International Class):** G06Q03000; G06F01730

**ECLA (European Class):** G06F01730W9V; G06Q03000A

**US Class:** 709224; 707E17121; 709221; 709226

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Maung, Zarni

**US Post Issuance:**

--US Certificate of Correction: 20031209 20031230 a Certificate of Correction was issued for this patent

--US Litigations: Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 5:05cv2554 ; Cashedge, Inc, Cashedge, Inc, 20050622 N.D.

California 3:05cv2554 ; Cashedge, Inc Cashedge, Inc 20060731 N.D. California 3:06cv4648

**Assignments Reported to USPTO:**

**Reel/Frame:** 10507/0858 **Date Signed:** 19991212 **Date Recorded:** 20000105

**Assignee:** YODLEE.COM 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086

**Assignor:** RAJAN, SREERANGA P.; WU, JONATHAN

**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004



**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20000105	()	AS	New owner name: YODLEE.COM, CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RAJAN, SREERANGA P.;WU, JONATHAN;REEL/FRAME:010507/0858; Effective date: 19991212;
20031209	()	CC	CERTIFICATE OF CORRECTION

**US7856453B2 20101221**  
**US2009265774A1 20091022**

**(ENG) Method and apparatus for tracking functional states of a web-site and reporting results to web developers**

**Assignee:** YODLEE INC US

**Inventor(s):** MALIK MASROOR US ; AKUNURI NAVEEN VENKATA US ; KERN CHRISTOPH US ; ARMANDPOUR TIM US ; KHAVARI SAM US ; NARASIMHAN GANESH US

**Application No:** US 49155109 A

**Filing Date:** 20090625

**Issue/Publication Date:** 20101221

**Abstract:** (ENG) A software tool for enabling automated tracking of activity related to the status and usage statistics of a plurality of Web sites on a data packet network is provided. The software tool comprises a network communication capability for establishing network communication between the software tool and the tracked Web sites; a plurality of data-reporting modules for obtaining and reporting data about tracked Web sites; a data input function for excepting data from the reporting modules and from external sources; a data recording function for recording and logging the data received from the reporting modules and from the external sources; and a data management function for organizing and storing the received data and rendering the data accessible for use in software development. A software engineer or developer accesses the site-tracking software and connected database through a Web browser from a network-connected workstation in order to utilize data mined from Web sites for the purpose of creating routines enabling automated navigation and site manipulation by proxy for subscribed users.

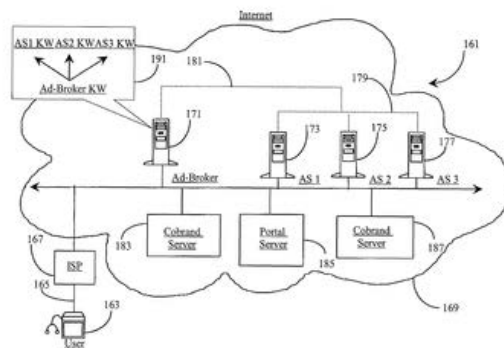
**Priority Data:** US 49155109 20090625 A N; US 2387604 20041227 A 1 N; US 63934600 20000815 A 1 Y; US 57369900 20000519 A C Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 12/491551 20090625 20090265774 US; 11/023876 20041227 7558795 US; 09/639346 20000815 6842782 US; 09/573699 20000519 US ABANDONED; 09/208740 19981208 6412073 US

**IPC (International Class):** G06F01730; G06F02100; H04L02908

**ECLA (European Class):** G06F01730W7; G06F02100N5A2S

**US Class:** 707792



**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Mizrahi, Diane

**Legal Status:** There is no Legal Status information available for this patent

**US6278993B1 20010821**

**(ENG) Method and apparatus for extending an on-line internet search beyond pre-referenced sources and returning data over a data-packet-network (DPN) using private search engines as proxy-engines**

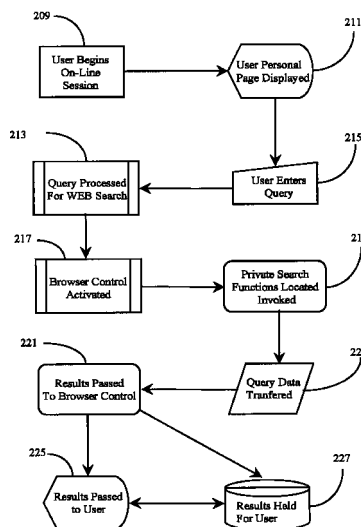
**Assignee:** YODLEE COM INC US

**Inventor(s):** KUMAR SRIHARI US ; RAJAN SREERANGA P US

**Application No:** US 49708900 A

**Filing Date:** 20000203

**Issue/Publication Date:** 20010821



**Abstract:** (ENG) A search function is provided for Internet searching capable of searching to greater depth than conventional search functions. The new function tests returned electronic documents from a first search for a second search function, and, finding a second function, transfers at least a form of first search criteria into the second search function, then initiated the second function, and returns at least addresses of documents found by the second function into the first function. In a preferred embodiment a search function according to the invention is provided by a subscription portal server, and operates by proxy, initiated and controlled by subscribers. In this form, primary searches may be limited to destinations registered to specific subscribers using the function.

**Priority Data:** US 49708900 20000203 A N; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/323598 19990601 US PENDING; 09/208740 19981208 US PENDING

**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906C2; H04L02908N1

**US Class:** 707003; 707005; 707E17109; 707E17116; 707E17119

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R; Central Coast Patent Agency, Inc.

**Examiner Primary:** Alam, Hosain T.

**Examiner Assistant:** Kindred, Alford W.

**Assignments Reported to USPTO:**

**Reel/Frame:** 10611/0276 **Date Signed:** 20000131 **Date Recorded:** 20000218



**Assignee:** YODLEE.COM A CORPORATION OF CALIFORNIA 595 LAWRENCE EXPRESSWAY  
SUNNYVALE CALIFORNIA 94086

**Assignor:** KUMAR, SRIHARI; RAJAN, SREERANGA P.

**Corres. Addr:** DONALD R. BOYS CENTRAL COAST PATENT AGENCY P.O. BOX 187 AROMAS,  
CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20000218	( )	AS	ASSIGNMENT New owner name: YODLEE.COM A CORPORATION OF CALIFORNIA 595 LAWRENC; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;RAJAN, SREERANGA P.;REEL/FRAME:010611/0276; Effective date: 20000131;
20000218	( )	AS	New owner name: YODLEE.COM, CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;RAJAN, SREERANGA P.;REEL/FRAME:010611/0276; Effective date: 20000131;
20000218	( )	AS	New owner name: YODLEE.COM A CORPORATION OF CALIFORNIA 595 LAWRENC; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;RAJAN, SREERANGA P.;REEL/FRAME:010611/0276; Effective date: 20000131;

**US2010005025A1 20100107**

**(ENG) Interactive Bill Payment Center**

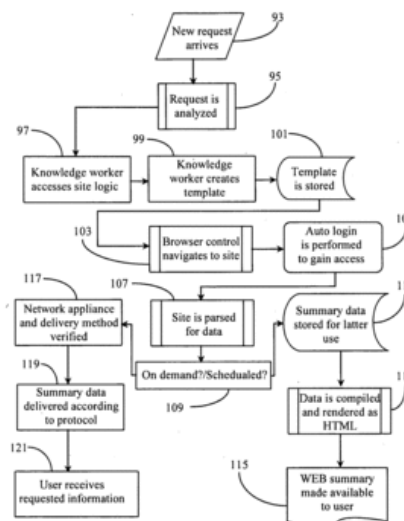
**Assignee:** KUMAR SRIHARI

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
KELLEY JOHN US ; HAYWARD BLAKE  
EARL US ; SCOTT JENNIFER GREEN US ;  
PANDURANGAN SENTHIL KUMAR US

**Application No:** US 50173309 A

**Filing Date:** 20090713

**Issue/Publication Date:** 20100107



**Abstract:** (ENG) A software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network is provided. A bill-payment module is provided within the software suite and comprises, an interactive main interface accessible from the module for listing the bills due and payment accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing bill history, an interactive set-up link embedded in the main interface for providing access to a secondary interface for configuring recurring payments, an interactive





transfer-funds link embedded in the main interface for providing access to a secondary interface for enabling automated transfer of funds between registered accounts, an interactive calendar link embedded in the main interface for providing access to a secondary interface for viewing calendar data, a plurality of interactive drop-down menus, each menu associated with a listed bill, the menus providing upon invocation a plurality of selectable, interactive options for treating the listed bill and an interactive refresh-all link embedded in the main interface for enabling selective or complete data refreshing of data displayed in the interface. A user operating the main interface from a remote node having access to the data-packet-network may view all aggregated bills and initiate treatment of such bills according to selected interactive options. The treatment is ordered by the operating user and performed by proxy by a service entity hosting the interface.

**Priority Data:** US 50173309 20090713 A N; US 78592901 20010216 A 3 N; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**IPC (International Class):** G06Q02000; G06Q04000; G06F003048; G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S

**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US6725425B1 20040420**

**(ENG) Method and apparatus for retrieving information from semi-structured, web-based data sources**

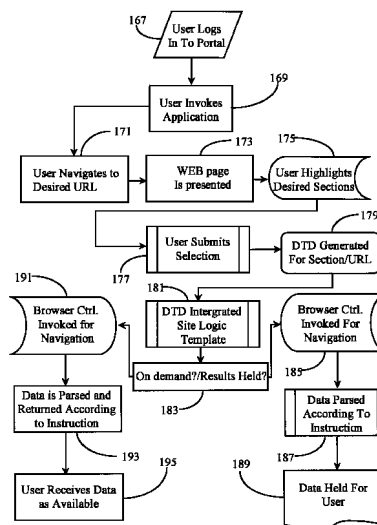
**Assignee:** YODLEE COM US

**Inventor(s):** RAJAN SREERANGA P US ; PANDURANGAN SENTHIL KUMAR US ; WU JONATHAN US

**Application No:** US 53264700 A

**Filing Date:** 20000322

**Issue/Publication Date:** 20040420



**Abstract:** (ENG) An Internet search system is structured for efficient data retrieval from semi-structured data sources. The configurable Internet WEB search system has a browser module for navigating to and displaying a WEB page, a block selection and configuration function having input tools for a user to select at least one block portion of a displayed WEB page for data retrieval, a data-type input function for a user to denote data type to be extracted from a selected block portion, and a search implementation function for implementing a search under the search system. The data type entered by the data input function is associated with a WEB page block selected, and upon search implementation the block selected is searched for the data type requested, and data found is retrieved to be provided to the user. In a preferred embodiment portions of the system are executed on a user station, and other portions on a Portal server to which the user may subscribe.

**Priority Data:** US 53264700 20000322 A N; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED





**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S;  
H04L02906C2; H04L02908N1

**US Class:** 715205; 707E17109; 707E17116; 707E17119; 715760

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Feild, Joseph

**Examiner Assistant:** Blackwell, James H

**Assignments Reported to USPTO:**

**Reel/Frame:** 10775/0158 **Date Signed:** 20000419 **Date Recorded:** 20000424

**Assignee:** YODLEE.COM 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086

**Assignor:** RAJAN, SREERANGA P.; PANDURANGAN, SENTHIL KUMAR; WU, JONATHAN

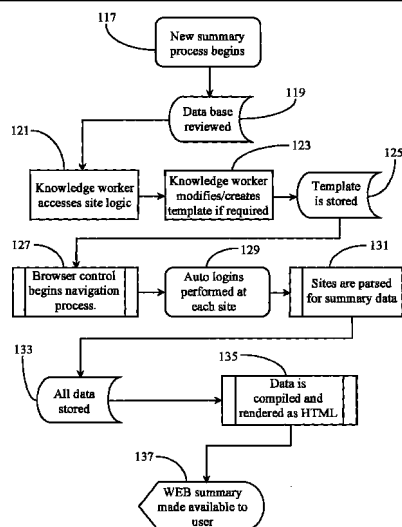
**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS,  
CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

<b>Date</b>	<b>+/-</b>	<b>Code</b>	<b>Description</b>
20000424	()	AS	New owner name: YODLEE.COM, CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RAJAN, SREERANGA P.;PANDURANGAN, SENTHIL KUMAR;WU, JONATHAN;REEL/FRAME:010775/0158; Effective date: 20000419;



**US7085997B1 20060801****(ENG) Network-based bookmark management and web-summary system****Assignee:** YODLEE COM US**Inventor(s):** WU JONATHAN US ; RAJAN SREERANGA P US**Application No:** US 57549100 A**Filing Date:** 20000518**Issue/Publication Date:** 20060801

**Abstract:** (ENG) A network-based URL management and data gathering system is provided. The system utilizes a client-side utility for capturing URLs during normal Web browsing, and a server-side utility for organizing and managing the captured URLs on the network. The server-side utility periodically sends a request to a proxy browsing and data gathering utility for navigating to and retrieving data from Web pages associated with the captured URLs. Data retrieved from the Web pages is returned in summary form for presentation to subscribing users. In preferred embodiments, the system is practiced on the Internet network between users operating an Internet-capable appliance having an Internet connection, and an Internet portal service.

**Priority Data:** US 57549100 20000518 A Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y; US 55034800 20000414 A 2 Y;

**Related Application(s):** 09/323598 19990601 6199077 US; 09/208740 19981208 6412073 US; 09/550348 20000414 US

**IPC (International Class):** G06F01500; G06F01721; G06F01700; H04L02908; G06F01730; H04L00900; H04L02906

**ECLA (European Class):** H04L02906S8D; G06F01730W5K; H04L02906C6C2; H04L02908N1; H04L02908N27R

**US Class:** 715201; 707E17114; 709224; 715200; 715215

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Bashore, William

**Assignments Reported to USPTO:**

**Reel/Frame:** 10867/0581 **Date Signed:** 20000517 **Date Recorded:** 20000602

**Assignee:** YODLEE.COM, A CORPORATION OF CALIFORNIA 595 LAWRENCE EXPRESSWAY SUNNYVALE CALIFORNIA 94086

**Assignor:** RAJAN, SREERANGA PRASANNAKUMAR; WU, JONATHAN

**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).



**Legal Status:**

Date	+/-	Code	Description
20000602	()	AS	New owner name: YODLEE.COM, A CORPORATION OF CALIFORNIA, CALIFORNI; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RAJAN, SREERANGA PRASANNAKUMAR;WU, JONATHAN;REEL/FRAME:010867/0581; Effective date: 20000517;

**US7313813B2 20071225**  
**US2004107269A1 20040603**

**(ENG) Method and apparatus for providing and maintaining a user-interactive portal system accessible via internet or other switched-packet-network**

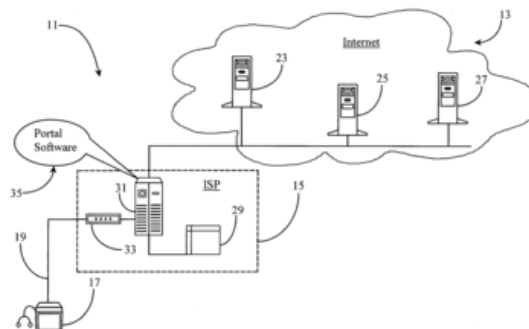
**Assignee:** YODLEE INC US

**Inventor(s):** RANGAN P VENKAT US ; INALA SAM US

**Application No:** US 61937503 A

**Filing Date:** 20030711

**Issue/Publication Date:** 20071225



**Abstract:** (ENG) An Internet Portal is enabled by software executing on an Internet-connected server. The Portal, in response to a log-on by a user, presents a secure and personalized page for and to the user, the personalized page having listed plural Internet destinations enabled by hyperlinks, wherein upon invocation of a hyperlink by the subscriber, such as by a point-and-click technique, the portal invokes a URL for the destination, and upon connection with the destination, transparently provides any required log-on information for user access at the destination. In an enhanced embodiment a search function is provided wherein a user may configure searches in any or all of the listed destinations on a personalized page. Provision is provided for log-on by limited appliances, such as by a Smartcard or embedded password, and in some embodiments functionality is provided in a browser plug-in wherein a user may navigate to a site, and, in response to a request for log-in data, the subscriber may use a hot key or pointer input, which will cause the browser to access and provide the needed data from the Password-All source.

**Priority Data:** US 61937503 20030711 A N; US 18014602 20020625 A 1 Y; US 20874098 19981208 A 1 Y;

**Related Application(s):** 10/619375 20030711 20040107269 20040603 US; 10/180146 20020625 6594766 US; 09/208740 19981208 6412073 20020625 US

**IPC (International Class):** H04L02900; G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27A; G06F01730W7; G06F02100N5A2S; H04L02908N27I

**US Class:** 726005; 707E17116

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Smithers, Matthew B

**Legal Status:** There is no Legal Status information available for this patent



**US2010185556A1 20100722**

**(ENG) Portfolio Synchronizing Between Different Interfaces**

**Assignee:** KUMAR SRIHARI

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
KELLEY JOHN US ; HAYWARD BLAKE  
EARL US ; SCOTT JENNIFER GREEN US ;  
PANDURANGAN SENTHIL KUMAR US

**Application No:** US 62122509 A

**Filing Date:** 20091118

**Issue/Publication Date:** 20100722

**Abstract:** (ENG) A system for updating parameters of financial transactions associated with financial services initiated and completed on behalf of or directly by a user through access to a data-packet-network into more than one electronic interface accessible to the user is provided. The system comprises, a main electronic interface supported by back-end software, the main interface for registering all user accounts into at least one portfolio group, the accounts accessible in detail through the main interface, at least one cobranded electronic interface supported by back-end software, the cobranded interface mirroring the accounts registered in the main electronic interface and a plurality of institution-specific electronic interfaces for providing direct account registration, reporting, and maintenance specific to accounts provided by the associated institutions. Through direct linking between the main, cobranded, and institution-specific interfaces, any parameters associated with any action initiated to a specific account through any of the interfaces is immediately propagated to the other interfaces.

**Priority Data:** US 62122509 20091118 A N; US 85423301 20010510 A 1 N; US 82661301 20010404 A C Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/854233 20010510 7644023 US; 09/826613 20010404 US ABANDONED;  
09/698708 20001027 7672879 US; 09/425626 19991022 6802042 US; 09/323598  
19990601 6199077 US; 09/208740 19981208 6412073 US

**IPC (International Class):** G06Q04000; G06F02100; G06F01730; H04L02908

**ECLA (European Class):** G06Q04000C; G06F01730W1F; G06F01730W7; G06F01730W9;  
G06F02100N5A2S

**US Class:** 705036R

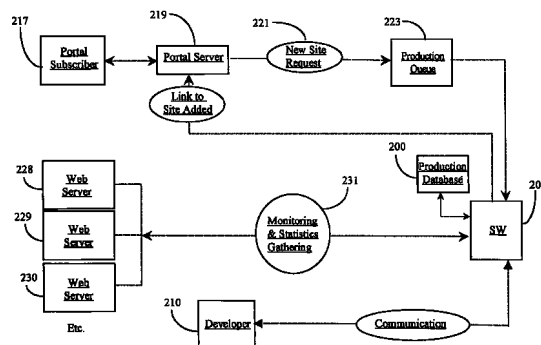
**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent



**US6842782B1 20050111****(ENG) Method and apparatus for tracking functional states of a web-site and reporting results to web developers****Assignee:** YODLEE INC US**Inventor(s):** MALIK MASROOR US ; AKUNURI NAVEEN VENKATA US ; KERN CHRISTOPH US ; ARMANDPOUR TIM US ; KHAVARI SAM US ; NARASIMHAN GANESH US**Application No:** US 63934600 A**Filing Date:** 20000815**Issue/Publication Date:** 20050111

**Abstract:** (ENG) A software tool for enabling automated tracking of activity related to the status and usage statistics of a plurality of Web sites on a data packet network is provided. The software tool comprises a network communication capability for establishing network communication between the software tool and the tracked Web sites; a plurality of data-reporting modules for obtaining and reporting data about tracked Web sites; a data input function for excepting data from the reporting modules and from external sources; a data recording function for recording and logging the data received from the reporting modules and from the external sources; and a data management function for organizing and storing the received data and rendering the data accessible for use in software development. A software engineer or developer accesses the site-tracking software and connected database through a Web browser from a network-connected workstation in order to utilize data mined from Web sites for the purpose of creating routines enabling automated navigation and site manipulation by proxy for subscribed users.

**Priority Data:** US 63934600 20000815 A N; US 57369900 20000519 A 2 Y; US 20874098 19981208 A 2 Y;**Related Application(s):** 09/573699 20000519 US PENDING; 09/208740 19981208 6412073 US GRANTED**IPC (International Class):** G06F02100; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27I; G06F01730W7; G06F02100N5A2S; H04L02908N27S**US Class:** 709224; 707010; 707E17116; 709217**Publication Language:** ENG**Filing Language:** ENG**Agent(s):** Boys, Donald R.**Examiner Primary:** Etienne, Ario**Examiner Assistant:** Salad, Abdullahi E.**Assignments Reported to USPTO:****Reel/Frame:** 11085/0856 **Date Signed:** 20000811 **Date Recorded:** 20000906**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES CALIFORNIA 94065**Assignor:** AKUNURI, NAVEEN VENKATA**Corres. Addr:** CENTRAL COAST PATENT AGENCY DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20000906	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MALIK, MASROOR;KERN, CHRISTOPH;KHAVARI, SAM;AND OTHERS;REEL/FRAME:011085/0856; Effective date: 20000811;

**US7200804B1 20070403**

**(ENG) Method and apparatus for providing automation to an internet navigation application**

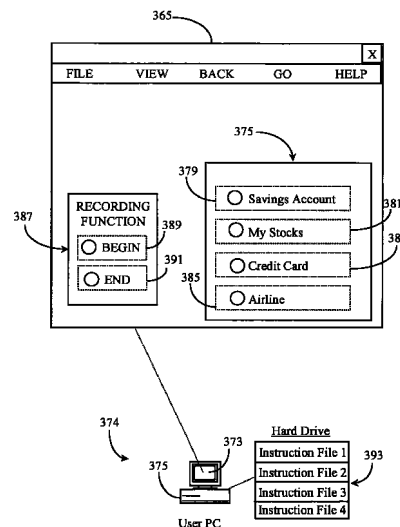
**Assignee:** YODLEE INC US

**Inventor(s):** KHAVARI SAM US ; ARMANDPOUR TIM US

**Application No:** US 65390800 A

**Filing Date:** 20000901

**Issue/Publication Date:** 20070403



**Abstract:** (ENG) A software application for enabling creation and execution of an automated browser navigation sequence is provided. The software application comprises a session recording module for recording parameters associated with a manual navigation sequence, a file creation module for converting data of a manual session into data comprising an executable sequence of instructions for conducting an automated navigation sequence, and an application-program-interface module for integrating a functional capability with the automated navigation sequence. The automated navigation sequence is characterized in that a completely automated browser-navigation sequence performed by the browser application is enabled through execution of the executable instruction sequence created from the recorded parameters of the manual navigation sequence.

**Priority Data:** US 65390800 20000901 A N; US 62949200 20000731 A 2 N; US 55034800 20000414 A 2 Y; US 53264700 20000322 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/629492 20000731 US PENDING; 09/550348 20000414 US PENDING; 09/532647 20000322 US PENDING; 09/323598 19990601 US PENDING; 09/208740 19981208 US PENDING

**IPC (International Class):** G06F01700; G06F02100; G06F01730; H04L02906; G06F01724; H04L02908

**ECLA (European Class):** H04L02908N33; G06F01724F; G06F01730W1; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906S8B; H04L02908A7; H04L02908N1; H04L02908N9; H04L02908N27C; H04L02908N29U

**US Class:** 715230; 707E17108; 707E17109; 707E17116; 707E17119; 715704

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.



**Examiner Primary:** Hutton, Doug

**Examiner Assistant:** Blackwell, James H.

**Assignments Reported to USPTO:**

**Reel/Frame:** 11214/0558 **Date Signed:** 20001004 **Date Recorded:** 20001031

**Assignee:** YODLEE.COM, INC. 2ND FLOOR 3600 BRIDGE PARKWAY REDWOOD SHORES CALIFORNIA 94065

**Assignor:** KHAVARI, SAM; ARMANDPOUR, TIM

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20001031	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KHAVARI, SAM;ARMANDPOUR, TIM;REEL/FRAME:011214/0558;SIGNING DATES FROM 20001004 TO 20001009;

**US2007130347A1 20070607**

**(ENG) Method and Apparatus for Providing Calculated and Solution-Oriented Personalized Summary-Reports to a User through a Single User-Interface**

**Assignee:** YODLEE COM INC US

**Inventor(s):** RANGAN P V US ; SHARMA MANOJ US ; RAJAN SREERANGA P US ; WU JONATHAN US

**Application No:** US 67276107 A

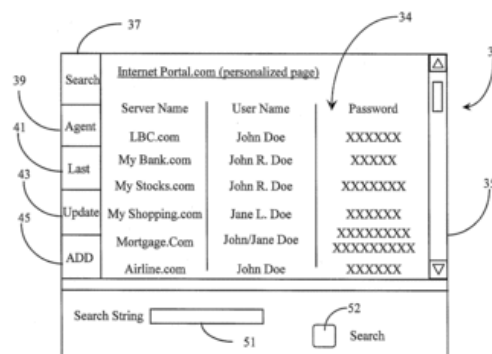
**Filing Date:** 20070208

**Issue/Publication Date:** 20070607

**Abstract:** (ENG) A system for harvesting information from network-based sources for a user has a network-connected server with software stored on and operable from a data repository accessible to the server, a user profile stored in the repository, comprising identification of network information sites storing information personal to the user, user ID for enabling the server to log in to the sites on behalf of the user, and one or more report algorithms associated with pre-defined user requests. The server, executing the software, upon receiving one of the pre-defined requests from the user, visits and gathers information from one or more sites indicated in the user profile, and presents a report to the user comprising the information gathered, formatted according to the report algorithm associated with the user's request.

**Priority Data:** US 67276107 20070208 A N; US 93385104 20040902 A 1 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 10/933851 20040902 7178096 US GRANTED; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED





**IPC (International Class):** G06F01516

**ECLA (European Class):** G06Q03000A; G06Q01000F

**US Class:** 709227

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US2004078464A1 20040422**

**(ENG) Method and apparatus for enabling real time monitoring and notification of data updates for WEB-based data synchronization services**

**Assignee:** RAJAN SREERANGA P. US

**Inventor(s):** RAJAN SREERANGA P US ; WU JONATHAN US

**Application No:** US 68575403 A

**Filing Date:** 20031014

**Issue/Publication Date:** 20040422

**Abstract:** (ENG) <p>An Internet subscription system for alerting subscribers to changes in data maintained at Internet sites has an input interface for a subscriber to specify a data condition to be monitored and a condition for notification and a gatherer for gathering data changes from one or more Internet sites. A guard compares data changes with the condition for notification, and a notification alert system notifies the subscriber of a change that meets the condition for notification. The system is particularly suited to notification requirements regarding metadata changes over multiple sources. Users can configure the system to many different frequencies and many different data and notification conditions. Alerts may be made to many different devices in different ways as well, and may or may not include specific data.</p>

**Priority Data:** US 39832099 19990916 A 2; US 46150599 19991214 A 2; US 68575403 20031014 A Z;

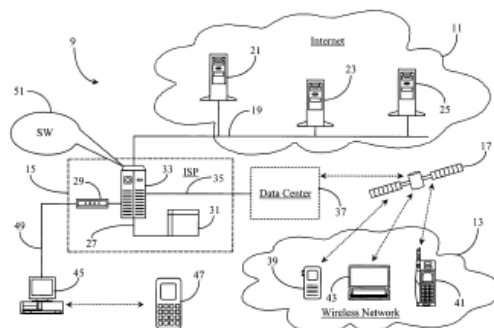
**Related Application(s):** 10/685754 20031014 09/461505 19991214 6633910 US GRANTED 09/461505 19991214 09/398320 19990916 6477565 US GRANTED

**IPC (International Class):** G06F015173

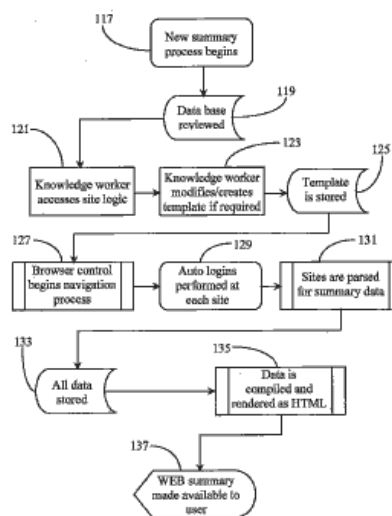
**ECLA (European Class):** G06F01730W9V; G06Q03000A

**US Class:** 709224; 709226; 709221

**Legal Status:** There is no Legal Status information available for this patent





**US2007180380A1 20070802****(ENG) Method and Apparatus for Providing Automation to an Internet Navigation Application****Assignee:** YODLEE COM INC US**Inventor(s):** KHAVARI SAM US ; ARMANDPOUR TIM US**Application No:** US 69568407 A**Filing Date:** 20070403**Issue/Publication Date:** 20070802

**Abstract:** (ENG) A software application for enabling creation and execution of an automated browser navigation sequence is provided. The software application comprises a session recording module for recording parameters associated with a manual navigation sequence, a file creation module for converting data of a manual session into data comprising an executable sequence of instructions for conducting an automated navigation sequence, and an application-program-interface module for integrating a functional capability with the automated navigation sequence. The automated navigation sequence is characterized in that a completely automated browser-navigation sequence performed by the browser application is enabled through execution of the executable instruction sequence created from the recorded parameters of the manual navigation sequence.

**Priority Data:** US 69568407 20070403 A N; US 65390800 20000901 A 1 Y; US 62949200 20000731 A 2 Y; US 55034800 20000414 A 2 Y; US 53264700 20000322 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/653908 20000901 7200804 US GRANTED; 09/629492 20000731 US PENDING; 09/550348 20000414 US PENDING; 09/532647 20000322 6725425 US GRANTED; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** G06F01740; G06F01500; G06F00300

**ECLA (European Class):** G06F01730W3; G06F02100N5A2S

**US Class:** 715704; 702187; 707E17111

**Publication Language:** ENG

**Filing Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US7672879B1 20100302**

**(ENG) Interactive activity interface for managing personal data and performing transactions over a data packet network**

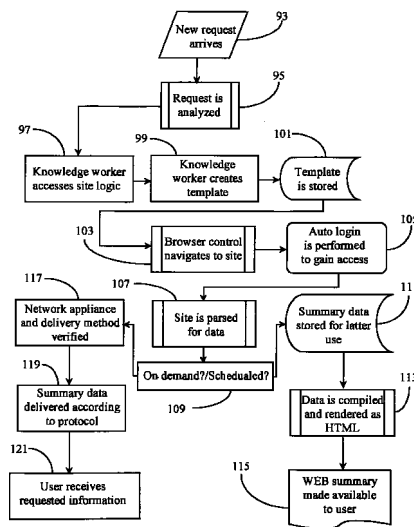
**Assignee:** YODLEE INC US

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ; KELLEY JOHN US ; HAYWARD BLAKE EARL US ; SCOTT JENNY US ; PANDURANGAN SENTHIL KUMAR US

**Application No:** US 69870800 A

**Filing Date:** 20001027

**Issue/Publication Date:** 20100302



**Abstract:** (ENG) A software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interface operated on a data-packet-network is provided. The data sources are available for direct network-access through multiple access points available from within the interface. The software suite comprises, a calendar module having at least one display interface for enabling viewing and manipulation of time and date-sensitive calendar data, a transaction module having at least one display interface for enabling viewing and manipulation of financially oriented account data, a portfolio tracking module having at least one display interface for enabling viewing and manipulation of investment oriented account data, a net-worth reporting module having at least one display interface for displaying a solution-oriented net-worth report compiled from the aggregated data, a bill-payment module having at least one display interface for enabling viewing and initiation of payment action regarding current billing data and an account-alert module having at least one display interface for reporting time and event sensitive account alerts related to changes in account data due to occurring events or pre-configured time parameters.

**Priority Data:** US 69870800 20001027 A Y; US 42562699 19991022 A 2 N; US 32359899 19990601 A 2 N; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/425626 19991022 6802042 US; 09/323598 19990601 6199077 US; 09/208740 19981208 US PENDING

**IPC (International Class):** G06Q04099

**ECLA (European Class):** G06F01730W1F; G06F01730W9; H04L02908N27I

**US Class:** 705030; 707500

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Poinvil, Frantzzy

**Legal Status:**

Date	+/-	Code	Description
20010201	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: KUMAR, SRIHARI; DESAI, SATYEN; KELLEY, JOHN AND OTHERS; SIGNED BETWEEN 20001219 AND 20010122; US-ASSIGNMENT DATABASE UPDATED: 20100302; REEL/FRA: 11503/883;



**US2010257094A1 20101007**

**(ENG) Interactive Transaction Center Interface**

**Assignee:** KUMAR SRIHARI

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
KELLEY JOHN US ; HAYWARD BLAKE  
EARL US ; SCOTT JENNIFER GREENE US ;  
PANDURANGAN SENTHIL KUMAR US

**Application No:** US 71571010 A

**Filing Date:** 20100302

**Issue/Publication Date:** 20101007

**Abstract:** (ENG) A transaction module having a summary interface is provided as part of a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The transaction module comprises, an interactive main interface accessible through the summary interface, the main interface for listing new transactions related to registered financial accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing transaction history, an interactive menu provided within the main interface for assigning categories to the listed transactions, an interactive save feature for saving category assignments to the listed transactions; a interactive bill-payment link provided within the main interface for linking the interface to a bill-payment module and an interactive transfer-funds link provided within the summary interface of the module for linking the summary face of the module to a secondary interface for transferring funds from one account to another. A user operating the main interface from a remote node having access to the data-packet-network may view all transactions according to option of category, account, and time period.

**Priority Data:** US 71571010 20100302 A N; US 89207804 20040714 A 1 N; US 82674701 20010404 A 3 Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 10/892078 20040714 7685525 US; 09/826747 20010404 6859212 US; 09/698708 20001027 7672879 US; 09/425626 19991022 6802042 US; 09/323598 19990601 6199077 US; 09/208740 19981208 6412073 US

**IPC (International Class):** G06F00301; G06Q04000; G06Q02000; G06F02100; G06F01730; G06F00946; G06Q03000; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F00946R6P; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; G06Q03000B

**US Class:** 705040; 715738; 705035; 715760

**Publication Language:** ENG

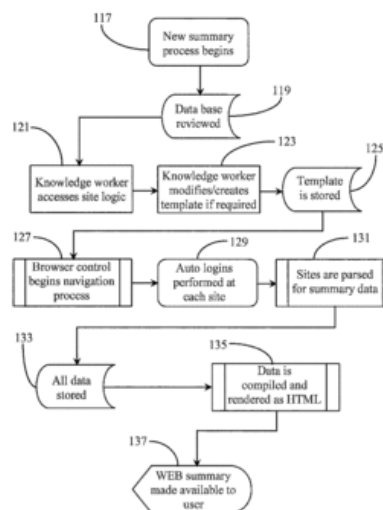
**Legal Status:** There is no Legal Status information available for this patent



**US2010169168A1 20100701**

**(ENG) Categorization of Summarized Information**

**Assignee:** SATYAVOLU RAMAKRISHNA  
**Inventor(s):** SATYAVOLU RAMAKRISHNA US  
**Application No:** US 71931010 A  
**Filing Date:** 20100308  
**Issue/Publication Date:** 20100701



**Abstract:** (ENG) A system for categorizing transactions includes a collection function gathering information concerning transactions, including at least date, description and amount of the transactions, for a particular person or enterprise, and a processing function categorizing individual ones of the collected transactions according to at least part of the transaction description.

**Priority Data:** US 71931010 20100308 A N; US 29335005 20051201 A 1 N; US 73740400 20001214 A C Y; US 32359899 19990601 A 3 Y;

**IPC (International Class):** G06Q01000; G06Q04000; G06F01730; G06N00502

**ECLA (European Class):** G06F01730W7L; G06Q03000C; H04L02908N27

**Publication Language:** ENG

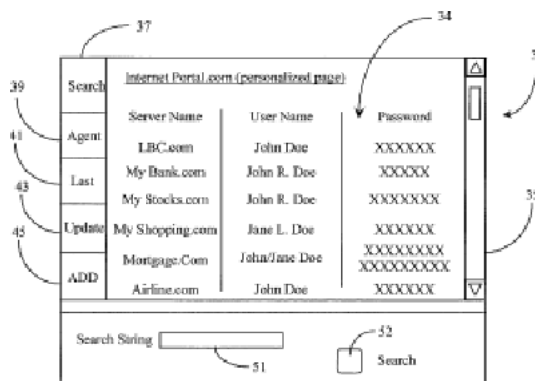
**Legal Status:** There is no Legal Status information available for this patent

**US2001000537A1 20010426**

**(ENG) Method and apparatus for obtaining and presenting WEB summaries to users**

**Inventor(s):** INALA SUMAN KUMAR US ; RANGAN P VENKAT US ; SATYAVOLU RAMAKRISHNA US ; RAJAN SREERANGA PRASANNAKUMAR US

**Application No:** US 73740400 A  
**Filing Date:** 20001214  
**Issue/Publication Date:** 20010426



**Abstract:** (ENG) A portal server includes a software agent configured to do summary searches for subscribers based on Internet destinations provided by the subscribers, to retrieve information from such destinations based on pre-programmed site information, and to download the summary information to the subscriber. The destinations and the nature of the information to be retrieved is pre-programmed. There is further a configuration and initiation interface for a subscriber to set up and start a summary search. In some cases the summary searches are configured for individual clients as templates stored and retrieved at the Internet-connected server. Also in some cases retrieved information is immediately

sent to the subscriber, and in other situations such information is saved at the portal to be retrieved by a subscriber at a later time. In preferred embodiments of the invention autologins are accomplished for a subscriber at Internet destinations by use of pre-stored configuration information.

**Priority Data:** US 73740400 20001214 A N; US 32359899 19990601 A 3 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208

**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906C2; H04L02908N1

**US Class:** 715500

**Legal Status:** There is no Legal Status information available for this patent

## US2001016034A1 20010823

**(ENG) Method and apparatus for obtaining and aggregating off-line user data for re-packaging and presentation to users over a data-packet-network**

**Inventor(s):** SINGH SUKHINDER US ; RAJAN SREERANGA PRASANNAKUMAR US

**Application No:** US 75755301 A

**Filing Date:** 20010109

**Issue/Publication Date:** 20010823

**Abstract:** (ENG) A data access and aggregation server for accessing and aggregating off-line message data for requesting users is provided wherein access is performed from a server location point on a data-packet-network. The data access and aggregation server comprises, at least one communication port for bi-directional data communication between the server and users accessing the server from remote access nodes having access to the network, at least one communication port for bi-directional communication between a server and remote communications systems operating on a telephone network, at least one data port for data communication between the server and a connected data repository, a processor for storing server software and communication software and a software application for enabling automated dialing and interaction with the remote communications systems. The server responding to requests from users dials destination numbers supplied by the users and upon connection therewith inputs any access codes required to trigger data playback whereupon the server records the played data and renders the data available to the requesting users. In some aspects the system also inputs access codes designed to trigger playback of message data at off-line systems.

**Priority Data:** US 75755301 20010109 A N; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

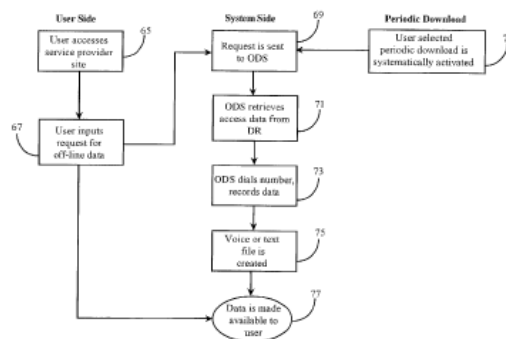
**Related Application(s):** 09/323598 19990601 6199077 US GRANTED 09/208740 19981208

**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906C2; H04L02908N1

**US Class:** 37908817; 709203; 709218

**Assignments Reported to USPTO:**



**Reel/Frame:** 11510/0662 **Date Signed:** 20010110 **Date Recorded:** 20010207  
**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES  
 CALIFORNIA 94065

**Assignor:** RAJAN, SREERANGA PRASANNAKUMAR; SINGH, SUKHINDEER

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CALIFORNIA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20010207	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SINGH, SUKHINDEER;RAJAN, SREERANGA PRASANNAKUMAR;REEL/FRAME:011510/0662; Effective date: 20010110;

**US2001023414A1 20010920**

**(ENG) Interactive calculation and presentation of financial data results through a single interface on a data-packet-network**

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ; KELLEY JOHN US ; HAYWARD BLAKE EARL US ; SCOTT JENNIFER GREEN US ; PANDURANGAN SENTHIL KUMAR US

**Application No:** US 75888001 A

**Filing Date:** 20010110

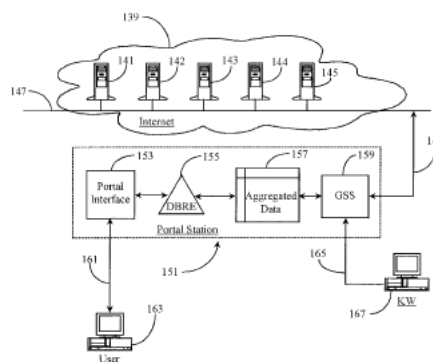
**Issue/Publication Date:** 20010920

**Abstract:** (ENG) An interactive user-interface for ordering specific calculated and solution-oriented results related to finance is provided within a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The interactive user interface comprises, an interactive drop-down menu containing a plurality of questions, the questions relating to various aspects of financial planning, an interactive inputs section containing a plurality of input data fields and selection boxes, the inputs section for configuring a calculative order, a submission function for submitting the calculative order upon completion thereof and a results window for displaying the data results derived from the calculations ordered. A user operating within the user-interface selects an issue from the drop-down menu, populates any vacant data fields and or selection boxes displayed in the inputs section as a result of selecting an issue, and submits the data for server-side calculation and subsequent display of the calculated results.

**Priority Data:** US 75888001 20010110 A Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/698708 20001027<RDA continuation-in-part> 09/425626 19991022 09/323598 19990601 6199077 US GRANTED<RDA continuation-in-part> 09/208740 19981208

**IPC (International Class):** G06F02100; G06F01730; H04L02908



**ECLA (European Class):** G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02908N27I

**US Class:** 705035; 34082526; 707004; 708170

**Assignments Reported to USPTO:**

**Reel/Frame:** 11510/0629 **Date Signed:** 20010112 **Date Recorded:** 20010207

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES CALIFORNIA 94065

**Assignor:** DESAI, SATYEN; HAYWARD, BLAKE EARL; KELLEY, JOHN; KUMAR, SRIHARI; PANDURANGAN, SENTHIL PANDURANGAN, SENTHIL KUMAR; SCOTT, JENNIFER

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20010207	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;DESAI, SATYEN;KELLEY, JOHN;AND OTHERS;REEL/FRAME:011510/0629;SIGNING DATES FROM 20010110 TO 20010117;

**US2010205065A1 20100812**

**(ENG) Interactive Funds Transfer Interface**

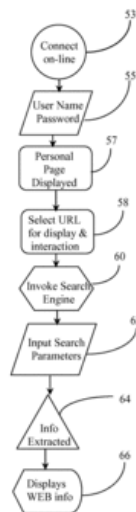
**Assignee:** YODLEE INC US

**Inventor(s):** KUMAR SRIHARI US ; INALA SUMAN KUMAR US ; SCOTT JENNIFER GREEN US ; HAYWARD BLAKE EARL US ; DESAI SATYEN US

**Application No:** US 76290710 A

**Filing Date:** 20100419

**Issue/Publication Date:** 20100812



**Abstract:** (ENG) In a software suite for enabling viewing and manipulation of data through a single portal accessible from a data-packet-network, a software interface for enabling proxy transfer of funds from one financial account to another is provided. The software interface comprises, an interactive main window for configuring transfer funds orders, viewing pending transfers, viewing transaction history, and viewing active account balances related to registered financial accounts, an interactive selection window accessible through the main interface, the selection window for enabling selection of individual accounts for grouping into a list of activated accounts and an automated confirmation window enabling confirmation of data parameters of a requested funds transfer. A user operating the main interface may initiate funds transfer orders to be performed between accounts at requested times by proxy in a fashion transparent at the time of execution to the requesting user.





**Priority Data:** US 76290710 20100419 A N; US 85422201 20010510 A 1 N; US 82674701 20010404 A 2 Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/854222 20010510 7734541 US; 09/826747 20010404 6859212 US; 09/698708 20001027 7672879 US; 09/425626 19991022 6802042 US; 09/323598 19990601 6199077 US; 09/208740 19981208 6412073 US

**IPC (International Class):** G06Q02000; G06Q04000; G06F00301; G06Q03000; G06F02100; G06F01730; G06F00946; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F00946R6P; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; G06Q03000B

**US Class:** 705026; 715760

**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

## US2010205079A1 20100812

**(ENG) Method and Apparatus for Configuring and Establishing a Secure Credential-Based Network Link Between a Client and a Service over a Data-Packet-Network**

**Assignee:** YODLEE INC US

**Inventor(s):** FERGUSON HILL US ; HAYWARD BLAKE US ; SATYAVOLU RAMAKRISHNA US

**Application No:** US 76443510 A

**Filing Date:** 20100421

**Issue/Publication Date:** 20100812

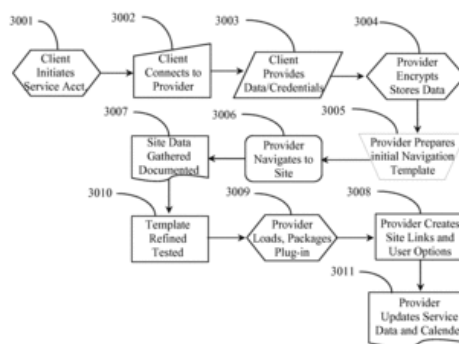
**Abstract:** (ENG) A system for establishing a direct network connection between a first and a second node over a data-packet-network includes a third network node having connection to the data-packet-network for providing an electronic interface accessible to the first node; a navigation agent directed by the third network node for navigating over the network to the second node to gather information; and at least one machine-readable instruction containing the instruction for directing and implementing the direct network connection. The electronic interface may be a Web page providing bill consolidation and payment services to a client operating the first node and wherein the connection established via the instruction enables transparent login payment of a bill at the second node, which may be a direct billing party interface of the client registered and listed on the Web page.

**Priority Data:** US 76443510 20100421 A N; US 2772404 20041230 A 1 N; US 73740400 20001214 A C Y; US 32359899 19990601 A 3 Y; US 53369603 20031231 P Y;

**Related Application(s):** 60/533696 20031231 US; 11/027724 20041230 7729283 US; 09/737404 20001214 US ABANDONED; 09/323598 19990601 6199077 US

**IPC (International Class):** G06Q03000; G06Q02000; G06F01516; G06F003048; G06F00300; H04L02908; G06F01130; H04L02906; G06F01721; G06F02100

**ECLA (European Class):** G06Q02000K3B; G06F02100N5A2; G06F02100N5A2S; G06Q03000B; H04L02906S8D; H04L02908N1A; H04L02908N13





**US Class:** 705034; 709219; 715764; 715749

**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US2003187925A1 20031002**

**(ENG) Software engine for enabling proxy chat-room interaction**

**Inventor(s):** INALA SUMAN KUMAR US ; KUMAR SRIHARI US

**Application No:** US 78487301 A

**Filing Date:** 20010215

**Issue/Publication Date:** 20031002

**PROXY CHAT SCHEDULER**

User Name:

Password:

URL of chat site:

Date of session:

Start time of session:

Duration of session:

Topic:

Proposed Queries

Query 1:

Query 2:

Query 3:

Query 4:

335

**Abstract:** (ENG) A software application for emulating a user in an interactive chat session hosted on a data-packet-network is provided. The software application comprises, a navigation interface for accepting input from a navigation system, a dialog interface for inputting dialog into the chat session, a session recorder for recording a chat session, a timer for regulating intervals of input of dialog entered into the chat session and a function disabler for disabling undesired communication events sourced from the chat session. The software application is characterized in that a user pre-configures a list of queries for input into an impending chat session, sending the queries along with session-associated parameters in the form of a request for navigation to and proxy interaction in a session on behalf of the user.

**Priority Data:** US 78487301 20010215 A N; US 55034800 20000414 A 2 Y; US 53264700 20000322 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/784873 20010215 09/550348 20000414 PENDING<RDA continuation-in-part> 09/550348 20000414 09/532647 20000322 PENDING 09/532647 20000322 09/323598 19990601 6199077 US GRANTED 09/323598 19990601 09/208740 19981208 PENDING

**IPC (International Class):** H04L02906; G06F02100; H04L02908; G06F01730; G06F01724

**US Class:** 709204; 715758

**Assignments Reported to USPTO:**

**Reel/Frame:** 11710/0943 **Date Signed:** 20010220 **Date Recorded:** 20010411

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD SHORES CALIFORNIA 94065

**Assignor:** INALA, SUMAN KUMAR; KUMAR, SRIHARI

**Corres. Addr:** DONALD R. BOYS P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
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20010411 ( ) AS New owner name: YODLEE.COM, INC., CALIFORNIA; :  
 ASSIGNMENT OF ASSIGNORS  
 INTEREST;ASSIGNORS:INALA, SUMAN KUMAR;KUMAR,  
 SRIHARI;REEL/FRAME:011710/0943; Effective date: 20010220;

## US2001032182A1 20011018

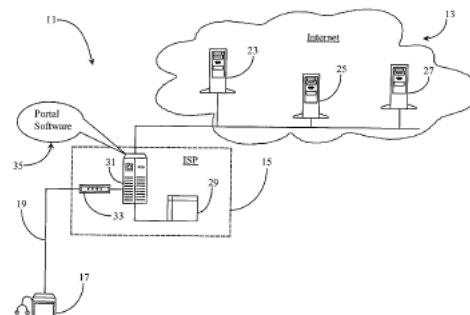
### (ENG) Interactive bill payment center

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
 KELLEY JOHN US ; HAYWARD BLAKE  
 EARL US ; SCOTT JENNIFER GREEN US ;  
 PANDURANGAN SENTHIL KUMAR US

**Application No:** US 78592901 A

**Filing Date:** 20010216

**Issue/Publication Date:** 20011018



**Abstract:** (ENG) A software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network is provided. A bill-payment module is provided within the software suite and comprises, an interactive main interface accessible from the module for listing the bills due and payment accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing bill history, an interactive set-up link embedded in the main interface for providing access to a secondary interface for configuring recurring payments, an interactive transfer-funds link embedded in the main interface for providing access to a secondary interface for enabling automated transfer of funds between registered accounts, an interactive calendar link embedded in the main interface for providing access to a secondary interface for viewing calendar data, a plurality of interactive drop-down menus, each menu associated with a listed bill, the menus providing upon invocation a plurality of selectable, interactive options for treating the listed bill and an interactive refresh-all link embedded in the main interface for enabling selective or complete data refreshing of data displayed in the interface. A user operating the main interface from a remote node having access to the data-packet-network may view all aggregated bills and initiate treatment of such bills according to selected interactive options. The treatment is ordered by the operating user and performed by proxy by a service entity hosting the interface.

**Priority Data:** US 78592901 20010216 A N; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/698708 20001027<RDA continuation-in-part> 09/425626 19991022 09/323598 19990601 6199077 US GRANTED<RDA continuation-in-part> 09/208740 19981208

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F01730W9;  
 G06F02100N5A2S

**US Class:** 705040

### Assignments Reported to USPTO:

**Reel/Frame:** 11711/0802 **Date Signed:** 20010221 **Date Recorded:** 20010411

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD SHORES  
 CALIFORNIA 94065



**Assignor:** DESAI, SATYEN; HAYWARD, BLAKE EARL; KELLEY, JOHN; KUMAR, SRIHARI; PANDURANGAN, SENTHIL KUMAR; SENTHIL KUMAR; SCOTT, JENNIFER GREENE

**Corres. Addr:** BOYS, DONALD R. P.O. BOX 187 AROMAS, CA 95004 US

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20010411	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;DESAI, SATYEN;KELLEY, JOHN;AND OTHERS;REEL/FRAME:011711/0802;SIGNING DATES FROM 20010220 TO 20010221;

**US2001051907A1 20011213**

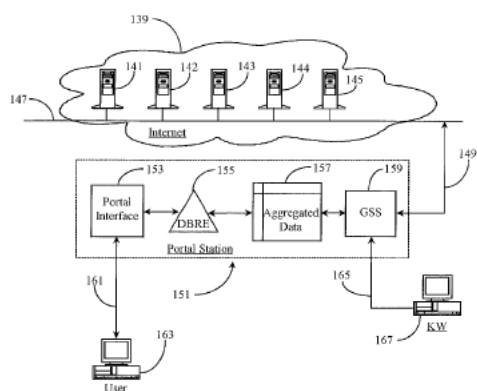
**(ENG) Interactive financial portfolio tracking interface**

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ; KELLEY JOHN US ; HAYWARD BLAKE EARL US ; SCOTT JENNIFER GREENE US ; PANDURANGAN SENTHIL KUMAR US

**Application No:** US 82661301 A

**Filing Date:** 20010404

**Issue/Publication Date:** 20011213



**Abstract:** (ENG) A portfolio-tracking module having a displayable summary interface is provided within a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network.. The portfolio-tracking module comprises, an interactive main interface accessible through the summary interface, the main interface for listing stocks and investment accounts for viewing, an interactive menu provided within the main interface for selecting views of individual investment accounts, the views appearing within the same or within a secondary interface, an interactive selection interface provided within the main interface for selecting investment accounts for data tracking, a first interactive hyperlink embedded within the main interface for linking the main interface to a secondary interface for viewing tracked information about personal investments and a second interactive hyperlink embedded within the main interface for linking the main interface to a secondary configuration interface for adding new investment accounts or stocks for tracking. A user working from within the module may interact with selected ones of interactive links for the purpose of invoking a variety of secondary interfaces containing more detailed information about registered investments, financial accounts, and performance data about stocks.

**Priority Data:** US 82661301 20010404 A N; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/698708 20001027<RDA continuation-in-part> 09/425626 19991022 09/323598 19990601 6199077 US GRANTED<RDA continuation-in-part> 09/208740 19981208

**IPC (International Class):** G06F02100; G06F01730; H04L02908



**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F01730W9;  
G06F02100N5A2S

**US Class:** 705036

**Assignments Reported to USPTO:**

**Reel/Frame:** 11926/0470 **Date Signed:** 20010405 **Date Recorded:** 20010622

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD SHORES  
CALIFORNIA 94065

**Assignor:** DESAI, SATYEN; HAYWARD, BLAKE EARL; KELLEY, JOHN; KUMAR, SRIHARI; PANDURANGAN, SENTHIL  
PANDURANGAN, SENTHIL KUMAR; SCOTT, JENNIFER GREENE

**Corres. Addr:** BOYS, DONALD R. P.O. BOX 187 AROMAS, CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20010622	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PANDURANGAN, SENTHIL KUMAR;KELLEY, JOHN;HAYWARD, BLAKE EARL;AND OTHERS;REEL/FRAME:011926/0470;SIGNING DATES FROM 20010405 TO 20010409;

**US6859212B2 20050222**  
**US2002007330A1 20020117**

**(ENG) Interactive transaction center interface**

**Assignee:** YODLEE INC US

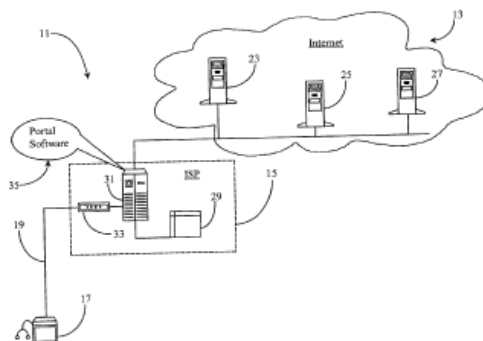
**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
KELLEY JOHN US ; HAYWARD BLAKE  
EARL US ; SCOTT JENNIFER GREENE US ;  
PANDURANGAN SENTHIL KUMAR US

**Application No:** US 82674701 A

**Filing Date:** 20010404

**Issue/Publication Date:** 20050222

**Abstract:** (ENG) A transaction module having a summary interface is provided as part of a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The transaction module comprises, an interactive main interface accessible through the summary interface, the main interface for listing new transactions related to registered financial accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing transaction history, an interactive menu provided within the main interface for assigning categories to the listed transactions, an interactive save feature for saving category assignments to the listed transactions; a interactive bill-payment link provided within the main interface for linking the interface to a bill-payment module and an interactive transfer-funds link provided within the summary interface of the module for linking the summary face of the module to a secondary interface for transferring



funds from one account to another. A user operating the main interface from a remote node having access to the data-packet-network may view all transactions according to option of category, account, and time period.

**Priority Data:** US 82674701 20010404 A N; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/698708 20001027 US PENDING; 09/425626 19991022 US PENDING; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S

**US Class:** 715744; 705026; 707E17109; 707E17116; 707E17119; 715762

**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Nguyen, Cao

**Legal Status:**

Date	+/-	Code	Description
20010621	( )	AS	ASSIGNMENT New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOORRED; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI /AR;REEL/FRAME:011926/0183;SIGNING DATES FROM 20010405 TO 20010410;
20010621	( )	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI;DESAI, SATYEN;KELLEY, JOHN;AND OTHERS;REEL/FRAME:011926/0183;SIGNING DATES FROM 20010405 TO 20010410;
20010621	( )	AS	New owner name: YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOORRED; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KUMAR, SRIHARI /AR;REEL/FRAME:011926/0183;SIGNING DATES FROM 20010405 TO 20010410;



**US2002059369A1 20020516****(ENG) Method and apparatus for creating and distributing non-sensitized information summaries to users****Inventor(s):** KERN CHRISTOPH US ; KELLEY JOHN US ;  
SRIVASTAVA JAIDEEP US ; LANDERS  
JONATHAN US ; SHANBHAG DINESH K US ;  
MURARKA NISHANT US

[ no drawing available]

**Application No:** US 82696801 A**Filing Date:** 20010404**Issue/Publication Date:** 20020516**Abstract:** (ENG) A software application for creating and distributing non-sensitized summaries from sensitized data aggregated on behalf of users is provided. The software application comprises, a data processing portion of the software for de-sensitizing data and incorporating the de-sensitized data into the form of a data summary, a data caching portion of the software for storing, managing, and serving non-sensitive data summaries and a user-interface portion of the software for enabling requests for data summaries and for enabling display of the requested summaries. A user operating the interface portion of the software initiates a request to the data-caching portion of the software, the request triggering service of a completed, non-sensitive data summary or summaries created by the data processing portion of the software. In preferred embodiments, the software is implemented on cooperating nodes connected to a data-packet-network, which may be the Internet network.**Priority Data:** US 82696801 20010404 A N; US 57369700 20000519 A 2 Y; US 20874098 19981208 A 2 Y;**Related Application(s):** 09/573697 20000519<RDA continuation-in-part> 09/208740 19981208**IPC (International Class):** G06Q03000; G06F02100; G06F01730; H04L02908**ECLA (European Class):** H04L02908N27S4; G06F01730W1F; G06F01730W7; G06F02100N5A2S;  
G06Q03000A**US Class:** 709203; 709246; 705014**Assignments Reported to USPTO:****Reel/Frame:** 11880/0263 **Date Signed:** 20010409 **Date Recorded:** 20010607**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, SUITE 200 REDWOOD SHORES  
CALIFORNIA 94065**Assignor:** KELLEY, JOHN; KERN, CHRISTOPH; LANDERS, JONATHAN; MURARKA, NISHANT; SHANBHAG, DINESH K  
SHANBHAG, DINESH K; SRIVASTAVA, JAIDEEP**Corres. Addr:** BOYS, DONALD R. P.O. BOX 187 AROMAS, CA 95004**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).**Legal Status:**

Date	+/-	Code	Description
20010607	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KERN, CHRISTOPH;KELLEY, JOHN;SRIVASTAVA, JAIDEEP;AND OTHERS;REEL/FRAME:011880/0263;SIGNING DATES FROM 20010405 TO 20010409;



**US7424520B2 20080909**  
**US2007294343A1 20071220**

**(ENG) Method and apparatus for restructuring of personalized data for transmission from a data network to connected and portable network appliances**

**Assignee:** YODLEE COM US

**Inventor(s):** DASWANI NEIL US ; INALA SUMAN KUMAR US ; SATYAVOLU RAMAKRISHNA US ; RANGAN P VENKAT US ; RAJAN SREERANGA P US

**Application No:** US 84602907 A

**Filing Date:** 20070828

**Issue/Publication Date:** 20080909

**Abstract:** (ENG) A system for retrieving and disseminating information records from Internet sources includes a client device and an intermediary server, including software, between the client device and the Internet. The collects a record specific to a client from an individual one of said Internet sources in a first form in which the record is recorded at the Internet source, transforms the record from the first form to a second form specific to an application other than an Internet browser application, the application executable by the client device, and transmits the transformed record to the client device for display in the application other than an Internet browser application executable by the client device. In some cases the client device connects by a data link that is not Internet-compatible link. Data mining on the Internet specific to clients and client devices is taught, with aggregation services and synchronization for keeping a client up-to-date efficiently for changing data content.

**Priority Data:** US 84602907 20070828 A N; US 28791102 20021104 A 1 Y; US 39832099 19990916 A 1 Y;

**Related Application(s):** 11/846029 20070828 20070294343 20071220 US; 10/287911 20021104 7263548 US; 09/398320 19990916 6477565 20021105 US

**IPC (International Class):** G06F01516

**ECLA (European Class):** G06F01730W1F; G06F01730W9V; H04L02908N27F; H04L02908N27S4

**US Class:** 709217; 709246; 709250

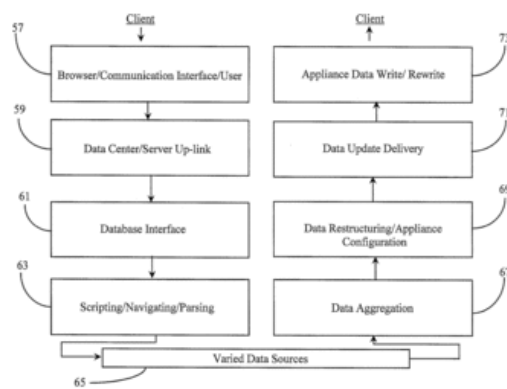
**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Central Coast Patent Agency, Inc.

**Examiner Primary:** Donaghue, Larry D

**Legal Status:** There is no Legal Status information available for this patent





**US2010325555A1 20101223****(ENG) Method and Apparatus for Providing Auto-Registration and Service Access to Internet Sites for Internet Portal Subscribers****Assignee:** RANGARAJAN ANAND**Inventor(s):** RANGARAJAN ANAND US ; LEE JI HOON US ; INALA SUMAN KUMAR US ; SATYAVOLU RAMAKRISHNA US ; RAJAN SREERANGA P US**Application No:** US 85183810 A**Filing Date:** 20100806**Issue/Publication Date:** 20101223

**Abstract:** (ENG) A method and apparatus is provided for populating and submitting electronic forms by proxy over a data-packet-network. The apparatus comprises a software application running on a system of network-connected servers that enables a user, connected in session with one of the servers, to navigate to a site containing an electronic form and obtain data about the site and about the form. The data obtained is used in conjunction with data about the user to construct a machine readable job order upon user request that may be executed for the purpose of automatic form population and submission to a host sponsoring the site. Upon acceptance of the submitted form, data used for passwords, log-in codes and user-names is returned to a data repository where it is entered along with specific site data as a new registered site item for a registering user such that future navigation to the site, auto log-in and data return may be performed automatically on behalf of the user.

**Priority Data:** US 85183810 20100806 A N; US 55034800 20000414 A B Y; US 53264700 20000322 A 2 N; US 32359899 19990601 A 2 N; US 20874098 19981208 A 2 N;

**Related Application(s):** 09/550348 20000414 US ABANDONED; 09/532647 20000322 6725425 US; 09/323598 19990601 6199077 US; 09/208740 19981208 6412073 US

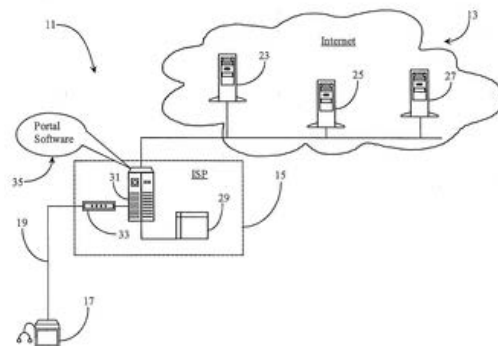
**IPC (International Class):** G06F00300; H04L02908; H04L02906; G06F01724

**ECLA (European Class):** H04L02906S8D; G06F01724F; H04L02906S8B; H04L02908A7; H04L02908N9; H04L02908N27A; H04L02908N29U; H04L02908N33

**US Class:** 715739

**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent





**US7734541B2 20100608**  
**US2002095651A1 20020718**

**(ENG) Interactive funds transfer interface**

**Assignee:** YODLEE INC US

**Inventor(s):** KUMAR SRIHARI US ; SCOTT JENNIFER  
 GREENE US ; HAYWARD BLAKE EARL US ;  
 DESAI SATYEN US

**Application No:** US 85422201 A

**Filing Date:** 20010510

**Issue/Publication Date:** 20100608

**Abstract:** (ENG) In a software suite for enabling viewing and manipulation of data through a single portal accessible from a data-packet-network, a software interface for enabling proxy transfer of funds from one financial account to another is provided. The software interface comprises, an interactive main window for configuring transfer funds orders, viewing pending transfers, viewing transaction history, and viewing active account balances related to registered financial accounts, an interactive selection window accessible through the main interface, the selection window for enabling selection of individual accounts for grouping into a list of activated accounts and an automated confirmation window enabling confirmation of data parameters of a requested funds transfer. A user operating the main interface may initiate funds transfer orders to be performed between accounts at requested times by proxy in a fashion transparent at the time of execution to the requesting user.

**Priority Data:** US 85422201 20010510 A N; US 82674701 20010404 A 2 Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y; US 23218700 20000912 P Y;

**Related Application(s):** 09/854222 20010510 20020095651 US; 60/232187 20000912 US; 09/826747 20010404 US PENDING; 09/698708 20001027 US PENDING; 09/425626 19991022 US PENDING; 09/323598 19990601 6199077 US; 09/208740 19981208 US PENDING

**IPC (International Class):** G06Q04000; G06Q03000; G06F02100; G06F01730; G06F00946; H04L02908

**ECLA (European Class):** G06F02100N5A2S; G06F00946R6P; G06Q03000B; H04L02908N27I

**US Class:** 705039; 705042; 705018; 235379

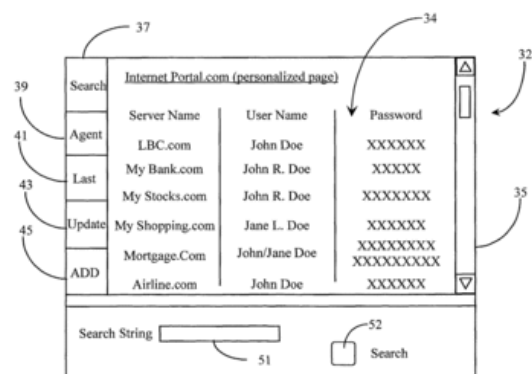
**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Felten, Daniel S

**Legal Status:** There is no Legal Status information available for this patent



**US7644023B2 20100105**  
**US2002019810A1 20020214**

**(ENG) Portfolio synchronizing between different interfaces**

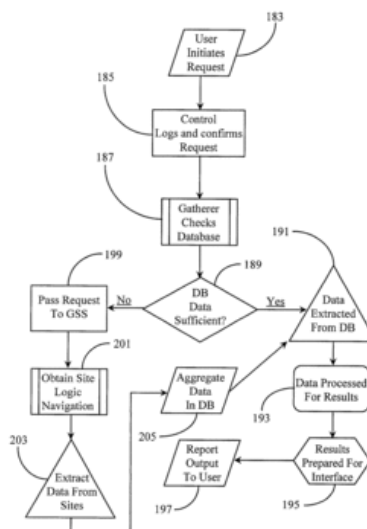
**Assignee:** YODLEE INC US

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
 KELLEY JOHN US ; HAYWARD BLAKE  
 EARL US ; SCOTT JENNIFER GREENE US ;  
 PANDURANGAN SENTHIL KUMAR US

**Application No:** US 85423301 A

**Filing Date:** 20010510

**Issue/Publication Date:** 20100105



**Abstract:** (ENG) A system for updating parameters of financial transactions associated with financial services initiated and completed on behalf of or directly by a user through access to a data-packet-network into more than one electronic interface accessible to the user is provided. The system comprises, a main electronic interface supported by back-end software, the main interface for registering all user accounts into at least one portfolio group, the accounts accessible in detail through the main interface, at least one cobranded electronic interface supported by back-end software, the cobranded interface mirroring the accounts registered in the main electronic interface and a plurality of institution-specific electronic interfaces for providing direct account registration, reporting, and maintenance specific to accounts provided by the associated institutions. Through direct linking between the main, cobranded, and institution-specific interfaces, any parameters associated with any action initiated to a specific account through any of the interfaces is immediately propagated to the other interfaces.

**Priority Data:** US 85423301 20010510 A N; US 82661301 20010404 A 2 Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**IPC (International Class):** G06Q04000; G06F02100; G06F01730; H04L02908

**ECLA (European Class):** G06Q04000C; G06F01730W1F; G06F01730W7; G06F01730W9;  
 G06F02100N5A2S

**Publication Language:** ENG

**Legal Status:** There is no Legal Status information available for this patent

**US2002015480A1 20020207**

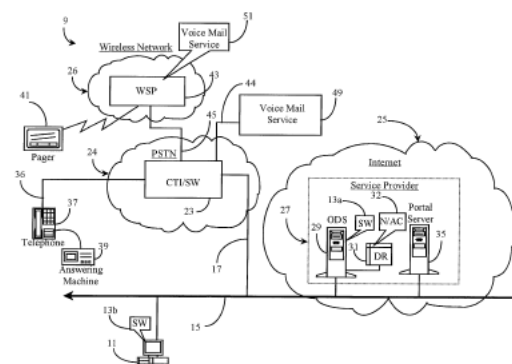
**(ENG) Flexible multi-network voice/data aggregation system architecture**

**Inventor(s):** DASWANI NEIL US ; TSAI SIN-MEI US ; FREUND JASON US

**Application No:** US 87207501 A

**Filing Date:** 20010601

**Issue/Publication Date:** 20020207



**Abstract:** (ENG) A network-based hardware/software system for accessing, obtaining, and aggregating disparately sourced message data on behalf of requesting users is provided. The system comprises, a first server connected to the network for accessing targeted HTTP sourced message data on behalf of the users, a second server connected to network for accessing targeted voice message data on behalf of the users, a data normalizing software application for receiving data obtained by the first and second servers and for normalizing the data into a common machine-readable language and a data repository accessible from first and second servers and from the data normalizing application, the data repository for storing data about the users, data about accessible data sources, and data aggregated for the users. A user subscribing to the system receives voice messaging reconstructed from the normalized data, the normalized data comprising aggregated voice-based and text-based messages originally obtained from the disparate data sources.

**Priority Data:** US 87207501 20010601 A N; US 75755301 20010109 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y; US 27925401 20010327 P Y;

**Related Application(s):** 60/279254 20010327; 09/757553 20010109<RDA continuation-in-part> 09/323598 19990601 6199077 US GRANTED 09/208740 19981208

**IPC (International Class):** H04L02908; H04L02906; G06F02100; G06F01730

**ECLA (European Class):** H04L02906S8; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; H04L02906; H04L02906C2; H04L02906S2D; H04L02908N1; H04L02908N27F; H04L02908N27I

**US Class:** 37908817

**Assignments Reported to USPTO:**

**Reel/Frame:** 12505/0678 **Date Signed:** 20010918 **Date Recorded:** 20020108

**Assignee:** YODLEE.COM, INC. 3600 BRIDGE PARKWAY, 2ND FLOOR REDWOOD SHORES CALIFORNIA 94065

**Assignor:** DASWANI, NEIL; FREUND, JASON; TSAI, SIN-MEI

**Corres. Addr:** BOYS, DONALD R. MARK A. BOYS P.O.BOX 187 AROMAS CA 95004

**Brief:** ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

**Legal Status:**

Date	+/-	Code	Description
20020108	()	AS	New owner name: YODLEE.COM, INC., CALIFORNIA; : ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DASWANI, NEIL;TSAI, SIN-MEI;FREUND, JASON;REEL/FRAME:012505/0678; Effective date: 20010918;



**US7685525B2 20100323**  
**US2004254881A1 20041216**

**(ENG) Interactive transaction center interface**

**Assignee:** YODLEE INC US

**Inventor(s):** KUMAR SRIHARI US ; DESAI SATYEN US ;  
 KELLEY JOHN US ; HAYWARD BLAKE  
 EARL US ; SCOTT JENNIFER GREENE US ;  
 PANDURANGAN SENTHIL KUMAR US

**Application No:** US 89207804 A

**Filing Date:** 20040714

**Issue/Publication Date:** 20100323

**Abstract:** (ENG) A transaction module having a summary interface is provided as part of a software suite for enabling viewing and manipulation of multiple categories of aggregated data compiled from a plurality of data sources and accessible through a single interfacing node operated on a data-packet-network. The transaction module comprises, an interactive main interface accessible through the summary interface, the main interface for listing new transactions related to registered financial accounts, an interactive history link embedded in the main interface for providing access to a secondary interface for viewing transaction history, an interactive menu provided within the main interface for assigning categories to the listed transactions, an interactive save feature for saving category assignments to the listed transactions; a interactive bill-payment link provided within the main interface for linking the interface to a bill-payment module and an interactive transfer-funds link provided within the summary interface of the module for linking the summary face of the module to a secondary interface for transferring funds from one account to another. A user operating the main interface from a remote node having access to the data-packet-network may view all transactions according to option of category, account, and time period.

**Priority Data:** US 89207804 20040714 A N; US 82674701 20010404 A 3 Y; US 69870800 20001027 A 2 Y; US 42562699 19991022 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 10/892078 20040714 20040254881 20041216 US; 09/826747 20010404 6859212 US; 09/698708 20001027 US PENDING; 09/425626 19991022 6802042 US; 09/323598 19990601 6199077 20010326 US; 09/208740 19981208 6412073 20020625 US

**IPC (International Class):** G06F01500; G06F01300; G06F01730; G06F02100; G06F00946; G06Q03000; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F00946R6P; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S; G06Q03000B

**US Class:** 715744; 715851

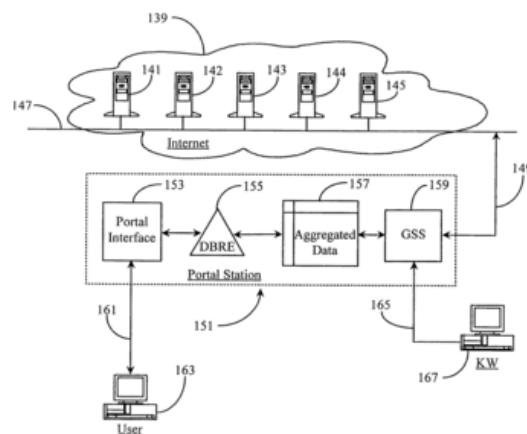
**Publication Language:** ENG

**Filing Language:** ENG

**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc.

**Examiner Primary:** Nguyen, Cao (Kevin)

**Legal Status:** There is no Legal Status information available for this patent

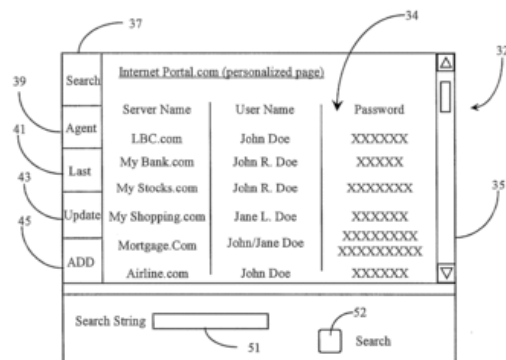


**US2008091663A1 20080417****(ENG) Software Bundle for Providing Automated Functionality to a WEB-Browser****Assignee:** INALA SUMAN K**Inventor(s):** INALA SUMAN K US ; CHANG JUEI US ;  
PANDURANGAN SENTHIL K US**Application No:** US 93074807 A**Filing Date:** 20071031**Issue/Publication Date:** 20080417

**Abstract:** (ENG) A software-bundle for navigating on a data network on behalf of a user by proxy is provided. The software bundle comprises a browser application for navigating on the network; a set of functional programs for performing tasks; a set of APIs for integrating the functional programs to the browser application and a control application. The control application functions to operate the software bundle including, spawning, managing and terminating an instance of the browser application and monitoring behavior of the browser instance during a navigation sequence. The software-bundle functions as a fully automated navigation system capable of performing all of the functions of a manual navigation system controlled by a user having a data-input system for controlling the navigation system.

**Priority Data:** US 93074807 20071031 A N; US 62949200 20000731 A 1 Y; US 55034800 20000414 A 2 Y; US 53264700 20000322 A 2 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 09/629492 20000731 US PENDING; 09/550348 20000414 US PENDING; 09/532647 20000322 6725425 US GRANTED; 09/323598 19990601 6199077 US GRANTED; 09/208740 19981208 6412073 US GRANTED

**IPC (International Class):** G06F01730**ECLA (European Class):** G06F00944W; G06F01730W1; H04L02908N1; H04L02908N27; H04L02908N27I; H04L02908N29U**US Class:** 707003; 707E17001**Publication Language:** ENG**Filing Language:** ENG**Legal Status:** There is no Legal Status information available for this patent

**US7178096B2 20070213**  
**US2005034055A1 20050210**

**(ENG) Method and apparatus for providing calculated and solution-oriented personalized summary-reports to a user through a single user-interface**

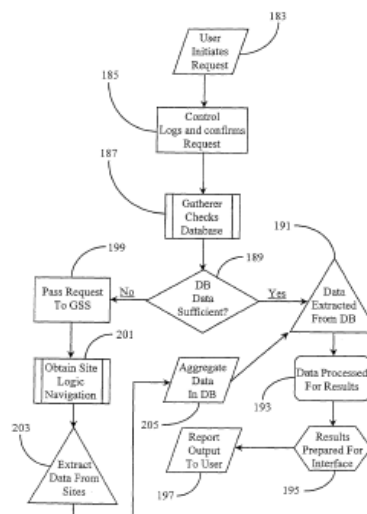
**Assignee:** YODLEE INC US

**Inventor(s):** RANGAN P VENKAT US ; SHARMA MANOJ US ; RAJAN SREERANGA P US ; WU JONATHAN US

**Application No:** US 93385104 A

**Filing Date:** 20040902

**Issue/Publication Date:** 20070213



**Abstract:** (ENG) An Internet-connected portal system has a data repository, a data-gathering system, a request processor, a plurality of report algorithms, and a report processor. The request processor receives a request from a user and matches the request to an individual one of the report algorithms. The data-gathering subsystem accesses plural Internet sites associated with the user and extracts raw data therefrom according to needs of the report algorithm. The report processor processes the raw data according to the report algorithm into metasummarized information defined by the report algorithm, and the portal system transmits the metasummarized information as a report to a destination associated with the report request. In some cases there is an aggregated-data database in the data repository storing aggregated data retrieved for specific users periodically, and the request processor checks the aggregated-data database for needed data before requiring the data-gathering system to retrieve data from the associated Internet sites. In the instance that the needed data is stored in the aggregated-data database, the report is prepared from the aggregated data. Reports can be in a mix of text and graphic formats.

**Priority Data:** US 93385104 20040902 A N; US 42562699 19991022 A 1 Y; US 32359899 19990601 A 2 Y; US 20874098 19981208 A 2 Y;

**Related Application(s):** 10/933851 20040902 20050034055 20050210 US; 09/425626 19991022 6802042 US; 09/323598 19990601 6199077 20010326 US; 09/208740 19981208 6412073 20020625 US

**IPC (International Class):** G06F01500; G06F02100; G06F01730; H04L02908

**ECLA (European Class):** H04L02908N27I; G06F01730W1F; G06F01730W7; G06F01730W9; G06F02100N5A2S

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**Agent(s):** Boys, Donald R.; Central Coast Patent Agency, Inc

**Examiner Primary:** Huynh, Cong Lac

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**WO2000034873A1 20000615**

**(ENG) METHOD AND APPARATUS FOR PROVIDING AND MAINTAINING A USER-INTERACTIVE PORTAL SYSTEM ACCESSIBLE VIA INTERNET**

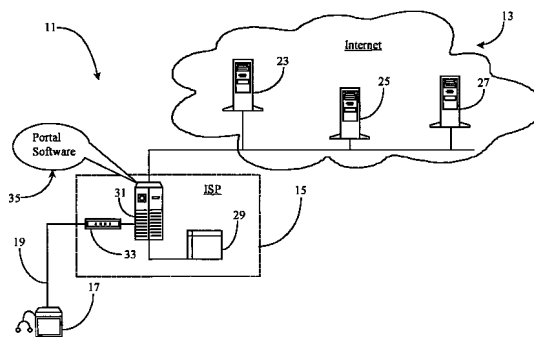
**Assignee:** YODLEE INC US

**Inventor(s):** RANGAN P VENKAT ; INALA SAM

**Application No:** US 9927533 W

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**Abstract:** (ENG) An Internet Portal is enabled by software (35) executing on an Internet-connected server (13). The Portal (31), in response to a log-on by a user, presents a secure and personalized page for and to the user, the personalized page having listed plural Internet destinations enabled by hyperlinks, wherein upon invocation of a hyperlink by the subscriber, such as by a point-and-click technique, the portal (31) invokes a URL for the destination, and upon connection with the destination, transparently provides any required log-on information for user access at the destination. In an enhanced embodiment a search function is provided wherein a user may configure searches in any or all of the listed destinations on a personalized page. Provision is provided for log-on by limited appliances, such as by a Smartcard or embedded password, and in some embodiments functionality is provided in a browser plug-in wherein a user may navigate to a site, and, in response to a request for log-in data, the subscriber may use a hot key or pointer input, which will cause the browser to access and provide the needed data from the Password-All source.

**Priority Data:** US 20874098 19981208 A Y;

**IPC (International Class):** G06F02100; G06F01730; H04L02908

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**Designated Countries:**

- Designated States: (national) AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW ::: (ARIPO) AP GH GM KE LS MW SD SL SZ TZ UG ZW
- Regional Treaties: (EAPO) EA AM AZ BY KG KZ MD RU TJ TM
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