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(72) Inventor; and

(71) Applicant : JAIN, Arun [IN/IN]; II Floor, Varishta Garden. No. 20, Club Gate Road, R. A. Puram, R. A. Puram, Chennai-28., Chennai 600 028 (IN).

(74) Agent: NATARAJAN, Ramaswami; H-1/5, Swagat Apartments, Thiruvalluvar Nagar, Tiruvanmiyur, Chennai 600 041 (IN).

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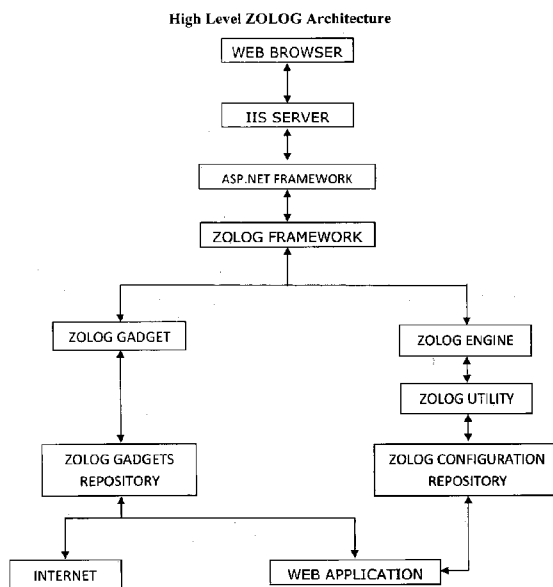
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- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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(54) Title: ZOLOG INTELLIGENT HUMAN LANGUAGE INTERFACE FOR BUSINESS SOFTWARE APPLICATIONS



(57) Abstract: The invention comprises a method of creating ZOLOG BAR software, laid above a business software application, which is used to provide instructions to business software applications. The method comprising the steps of programming a signal processor hardware to host the ZOLOG Technology Software, enabling users to provide inputs through the ZOLOG BAR in most intuitive verbal or written human way for carrying out a particular task by which instructions are sent to business software applications, which then process the instructions and present the summary for review to the user, and executing the task upon approval by the user ZOLOG is the trademark used for application designed using methodology and mentioned in this patent application.



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Zolog Intelligent Human Language Interface for Business Software Applications

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SPECIFICATION

Cross Reference to Related Application

This application is the complete specification of the invention originally disclosed in the
10 provisional patent application 2214/ CHE/ 2009 filed on 14.09.2009 from which it claims
the priority date.

Field of the Invention

15 The invention under consideration is in the field of Business Software Application and
design of the application layer** through which humans interact with software applications
for giving instructions.

** Application Layer - The application layer is the OSI (Open Systems Interconnection
Reference Model) layer closest to the end user. This means that both the OSI application
20 layer and the user interact directly with the software application.

Background of the Invention

World over, Computer Application Interfaces are designed to use a navigation tool bar with menu options. Typically, the menu bar, in various forms and shapes is designed to provide the first set of blocks for various possible tasks that can be performed by the application. With further clicks on any specific block, the User Interface (UI) leads the user to the next screen or drop-down options and so on. This is how traditionally UIs are designed & implemented.

Shortcomings of current approaches to traditional application user interface design

Long time-to-complete an activity and long learning curve for new users

- 10 In most cases, it takes several clicks for end-users to reach the desired level at which the activity can be completed. Also, the learning curve for a new user when faced with a new application is long and tends to be similar across applications.

High investment in user training

- 15 It also takes significant amount of user training on various modules of the application before the user can start using the system effectively. This approach becomes very time consuming especially in cases where a large number of users need to be trained on a particular application, when the effort can require several hours / man-months of training.

20 Higher design effort required to create a 'minimum-click' UI today

At the design level, significant amount of research has been performed by experts in the GUI field to ensure that the user uses minimum clicks to complete a particular task. Despite

this, it takes long time for GUI interface designers to build application pages with current UI approaches even after best possible grouping of various features. The outcome also continues to remain very subjective and person dependant. Furthermore, any new modules added to the application also necessitate a redesign of the application menu and drop-
5 downs.

Summary of the Invention

ZOLOG is a new-age application UI design methodology which makes the whole
10 experience of using a software application much more easier based on the most logical and natural human instructions for initiating a particular activity or task. The ZOLOG Framework comprises of powerful features that makes it a unique and revolutionary approach in the software applications world.

15 Brief description of drawings

High level architecture

The ZOLOG framework, which consists of ZOLOG Engine and ZOLOG Gadgets, built
20 on the ASP.Net framework and IIS server.

Web application accesses the ZOLOG framework to complete any form transactions and for pulling the forms through form aliases and also to view the data in the form of ZOLOG gadgets.

ZOLOG engine

This Powerful core engine searches and executes user queries on the ZOLOG configuration
5 Repository through ZOLOG utility.

This works through this Utility to do configurations such as add/remove search words,
form aliases and ZOLOG functions using which any form transaction can be completed at
one click.

10

These configurations are stored in the ZOLOG configuration Repository.

The ZOLOG framework, Gadgets, ZOLOG Functions, forms or aliases can be accessed
through the Web application, either from Internet or Intranet.

15

ZOLOG gadgets

Gadgets are miniature of information from various sources. These gadgets are created through
Gadget master, and stored in the ZOLOG Gadgets Repository. Whenever a user adds a new gadget,
20 it is reflected in the Repository.

ZOLOG configuration repository

This configuration repository consists of search words and also the functions to either open the
25 respective form or do in-line transactions in the ZOLOG bar.

ZOLOG data flow diagram

The ZOLOG Framework consists of an efficient and intelligent ‘Search engine’ and an innovative ‘Gadget based portal’. This intelligent search engine helps the user by triggering
5 his/ her thoughts, prompting the possible available options as he / she keeps typing the words or text to initiate a particular task. Publicly known “Type forwarding” feature is being used to enable this.

The ZOLOG can be accessed by both Admin and Normal users.

10

The Form Aliases, ZOLOG functions and the Gadget masters are created and managed by the admin users. The Gadgets added by the Admin users are available in the Home tab of the ZOLOG portal page.

15 Normal user can also personalize these settings that would be applicable only for that user.

These configurations are stored in the ZOLOG configuration Repository for faster accessing.

20 The ZOLOG Framework also contains ‘Quick Launch’, a feature that facilitates the user in maintaining and accessing frequently used forms or Internet websites with just one click, which shows the selected URL in a sliding window.

This Sliding window feature helps to refer and work on multiple information areas within a Single window and thus increases the overall productivity.

All users can create and manage their Sliding windows.

5

User can stack up to a maximum of 10 quick launch items of 5 each on both left and right pane.

The Concept: Human Intuitive User Interface for Business Software Applications

10 The ZOLOG inventors worked on the premise that traditional approaches to improving GUI design through menu-optimization, creation of drop downs and tabs etc could provide only incremental and limited enhancements to productivity.

In contrast, a menu-free approach to design of software application UI would be able to
15 deliver an exponentially high user experience for applications. This would necessitate a revolutionary concept in UI design based on natural human tendencies and approaches to performing a particular task or activity.

In response to this need, a menu-free, simple ZOLOG bar based GUI interface has been
20 designed by inventors, under the brand ZOLOG.

This is an innovative concept of interacting with Business Software Applications, which relies on most common human approaches and tendencies for performing a particular task.

The inventors claim is around this innovative design on all software applications, on all software platforms.

The multifold benefits of this alternative approach to UI Design are:

5

- Intuitive Transaction Execution
- Zero Leveraging Time
- Faster Execution of Transactions

10 **Appendix A**

Sample set of Instructions that would be given by Application User

Given below is **Sample Instruction Set**, which will be detailed out in full patent application further.

15

In one preferred embodiment of the application wherein the application is directed towards Human Resources Management, the following may be the requests that may be included in the type forwarding scheme among others.

20 **Leave Request**

I want to apply leave on [Date]/[Day]

I want leave on [Date]/[Day]

I want permission to be away from office on [Date]/[Day]

Please cancel my leave on [Date]/[Day]

Cancel my travel on [Date]/[Day]

I want to regularize attendance on

5 I wish to resign effective from

I wish to encash my leave for xxx days.

Reimbursement Requests

10. I want reimbursement for [purpose]

Help Requests

I need help on []

15

Travel Requests

I wish to travel to on [Date]/[Day]

I want to travel from [City Name] to [City Name]

20 I want to travel from [City Name] to [City Name] on [Date]/[Day]

I need pick up on [Date]/[Day]

I need pick up at [City Name]

Service Requests

I require a laptop

I wish to officiate

5 I need visa for [Country]

I need salary advance of [Amount]

I need a salary certificate

I require business cards

10 **Training Requests**

I wish to attend training on

What are the holidays next month?

15 It will be appreciated by those skilled in the art that the above embodiment is only a modification of the invention and the invention can be extended to many different fields where a search engine interface can be used to prefill a form and such modifications and applications will also fall within the scope of the present invention. The invention as described herein is only limited by the specific limitations that are acknowledged in the
20 claims to the invention made herein.

Key features of the invention are as follows:

The invention comprises a method of creating ZOLOG BAR software, laid above a business software application, which is used to provide instructions to business software applications. The method comprising the steps of programming a signal or multi-processor hardware to host the ZOLOG software, enabling users to type in a ZOLOG interface bar for carrying out a particular task by which instructions are sent to business software applications which then process the instructions and present the summary for review to the user, and executing the task upon approval by the user.

The user can give instructions in intuitive human language both using spoken and written form of expression. The instruction can be given by typing on a ZOLOG interface bar. The instruction given by typing, inventors are patenting certain statements for giving instructions, a sample set for the same is given in Appendix A and detailed instructions set will be mentioned in full patent application. The instruction can be given through voice recognition software or any third party interface software.

Zolog interacts with the business application to locate relevant form or equivalent object for processing user instructions. The form or equivalent object in the business application get auto filled based on instruction given by the user. The filled form or equivalent object is presented to the user for verification and submission for processing upon user verification to the zolog software enabled hardware.

The instructions can be provided in all known human languages using the zolog interface English, Spanish, French, German, Portuguese, Arabic, Urdu, Persian, Hindi, Tamil, Telugu, Kannada, Chinese, Japanese, Korean, Thai, Malayalam, Bengali, Russian.

The instructions can be applied to various business applications including and not limited to Human Resource Management Software Business Applications, Banking & Financial Software Business Applications, Insurance Software Business Applications, Retail Software Business Applications, Health care Software Business Applications, and so on.

The method can be delivered around various devices like Web Browsers (Internet Explorer, Netscape, Google Chrome, Mozilla Firefox, etc), Mobile Devices, PDAs & Mini Computers, ATMs & Kiosks,

The method can be applied through any combination of Software & Hardware Net Framework on Windows Platform / Linux / Macintosh Operating Systems, Java Framework on Windows Platform / Linux / Macintosh Operating Systems, Open Systems Software on Windows Platform / Linux / Macintosh Operating Systems.

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CLAIMS

What is claimed is:

1. The invention comprises a method of creating ZOLOG BAR software, laid above a business software application, which is used to provide instructions to business software applications. The method comprising the steps of programming a signal processor hardware to host the ZOLOG Technology Software, enabling users to provide inputs through the ZOLOG Bar in most intuitive verbal or written human way for carrying out a particular task by which instructions are sent to business software applications, which then process the instructions and present the summary for review to the user, and executing the task upon approval by the user.
2. The method according to claim 1 wherein the user can give instructions through voice recognition software or any third party interface software in intuitive human language both using SPOKEN and WRITTEN form of expression.
3. The method according to claim 2 wherein the instruction can be given by typing on a ZOLOG BAR by typing, inventors are patenting certain statements for giving instructions, a sample set for the same is given in Appendix A

Appendix A

Sample set of Instructions that would be given by Application User

Given below is **Sample Instruction Set**, which will be detailed out in full patent application further.

Leave Request

I want to apply leave on [Date] / [Day]

I want leave on [Date] / [Day]

I want permission to be away from office on [Date] / [Day]

Please cancel my leave on [Date] / [Day]

Cancel my travel on [Date] / [Day]

I want to regularize attendance on

I wish to resign effective from

I wish to encash my leave for xxx days

Reimbursement Requests

I want reimbursement for [purpose]

Help Requests

I need help on []

Travel Requests

I wish to travel to on [Date] / [Day]

I want to travel from [City Name] to [City Name]

I want to travel from [City Name] to [City Name] on [Date] / [Day]

I need pick up on [Date] / [Day]

I need pick up at [City Name]

Service Requests

I require a laptop

I wish to officiate

I need visa for [Country]

I need salary advance of [Amount]

I need a salary certificate

I require business cards

Training Requests

I wish to attend training on

What are the holidays next month?

4. The method according to claim 3 wherein zolog interacts with the business application to locate relevant form or equivalent object for processing user instructions which gets auto filled based on the instruction by the user.
5. The method according to claim 4 wherein Filled form or equivalent object is presented to the user for verification and submission for processing upon user verification to the zolog software enabled hardware.

6. The method according to claim 1 is delivered through Mobile Devices, PDAs, Mini Computers, ATMs, Kiosks.
7. The method of according to claim 1, wherein instructions can be provided in all known human languages English, Spanish, French, German, Portuguese, Arabic, Urdu, Persian, Hindi, Tamil, Telugu, Kannada, Chinese, Japanese, Korean, Thai, Malayalam, Bengali, Russian using the zolog interface.
8. The method according to claim 1, wherein instructions can be provided to business applications for applications of business applications, Human Resource Management, Software Business Applications, Banking & Financial Software Business Applications, Insurance Software Business Applications, Retail Software Business Applications, Health care Software Business Applications.
9. The method according to claim 1, is delivered around Web Browsers, Internet Explorer, Netscape Navigator, Google Chrome, Mozilla Firefox
10. The method according to claim 1, can be applied through any combination of Software & Hardware, .Net Framework on Windows Platform / Linux / Macintosh Operating Systems, Java Framework on Windows Platform / Linux / Macintosh Operating Systems, Open Systems Software on Windows Platform / Linux / Macintosh Operating Systems.

High Level ZOLOG Architecture

