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RSS FEED VISUALIZATION

JYOTSNA BAGRET
Department of Computer Engineering, Bharati Vidyapeeth's College of Engineering for Women, Pune Katraj, Pune-411 043, India, rj198789@gmail.com

PRASANNA MUNDADA
Department of Computer Engineering, Bharati Vidyapeeth's College of Engineering for Women, Pune Katraj, Pune-411 043, India, prasannamundada@gmail.com

SABAH TAZEEN
Department of Computer Engineering, Bharati Vidyapeeth's College of Engineering for Women, Pune Katraj, Pune-411 043, India, tsabah@yahoo.in

TANUJA MULLA
Department of Computer Engineering, Bharati Vidyapeeth's College of Engineering for Women, Pune Katraj, Pune-411 043, India, tanuja.7551@gmail.com

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RSS FEED VISUALIZATION

JYOTSNA BAGRET[1], PRASANNA MUNDADA[2], SABAH TAZEEN[3] & TANUJA MULLA[4]

[1,2,3&4] Department of Computer Engineering, Bharati Vidyapeeth's College of Engineering for Women, Pune
Katraj, Pune-411 043, India
E-mail: rj198789@gmail.com, prasannamundada@gmail.com, tsabah@yahoo.in, tanuja.7551@gmail.com

Abstract- This paper describes how the web content visualization can be greatly improved using the modeling technique. Web content visualization is the outcome of effort made to avail an improved 3D visualization unlike the 2D web content visualization at present. Web page navigation in this case will be depicted by a 2D graph and the web content will be visualized in the form of 3D graph. Also the RSS feeds will be visualized in the form of 3D graph. In normal browser we type name of the URL in the address bar and that URL is downloaded. But the 3D browser takes any URL as an input and generates a 3D graph of the whole website. When we type the URL, a root node of this URL is created. And then this URL goes to the Parser. The parser, parse this web page and gives output in the form of the set of the hyperlinks. Corresponding to each link we create a node and it is attached to the root node. In this way the whole 3D graph of the website is generated. Different color schemes are used for the nodes of different links e.g. text links, image links, video links etc. Advanced search facility is also provided. Moreover as the graph is 3D in nature, the user can rotate the graph as per his requirement.

Keywords- *Information Visualization, RSS feed visualization, web page visualization, Interactive Information Retrieval*

I. INTRODUCTION

With the emerging trend in technology and increase in the current period of information our social and hi-tech life revolves around all facets of information. Information has become an indispensable part of our lives. Information visualization has always been under developing and upgrading phase. For example, Earlier the information used to be visualized in only two dimensions which is not so interactive and presentable so there has been a continuous research to present the information in three dimension, as this is more effective and provides a better perspective.

A study [1] from 2006 shows that 88% of users will try a new search if they do not find what they seek in the first three pages. That means in a usual search interface the users would review 30 results and then they will start a new search with a different query or they will modify their previous query to get a different set of search results.

To overcome the shortcomings of the traditional web search interfaces web visualization using graphs has been developed. It takes into account the concept of information visualization to visualize search results, web pages and RSS feeds using nodes.

Today, "Human Computer Interface" is the talk of the IT industry. Means all the IT companies give preference to the GUI of the product they are developing. For example, Microsoft has developed "Vista" operating system. It doesn't have much more extended functionality. Only purpose behind that is to improve user interface. Following the same trend, we also thought of developing the existing concept with the improved, efficient and more user friendly GUI with the help of the visualization techniques. So we have decided to develop a Web Brower with a difference. Our implementation will help not only to the Expert users but also to the novices. Also, one more purpose is to attract elderly persons who hesitate to surf internet towards surfing so that they will also be exposed to the treasure of information i.e. internet.

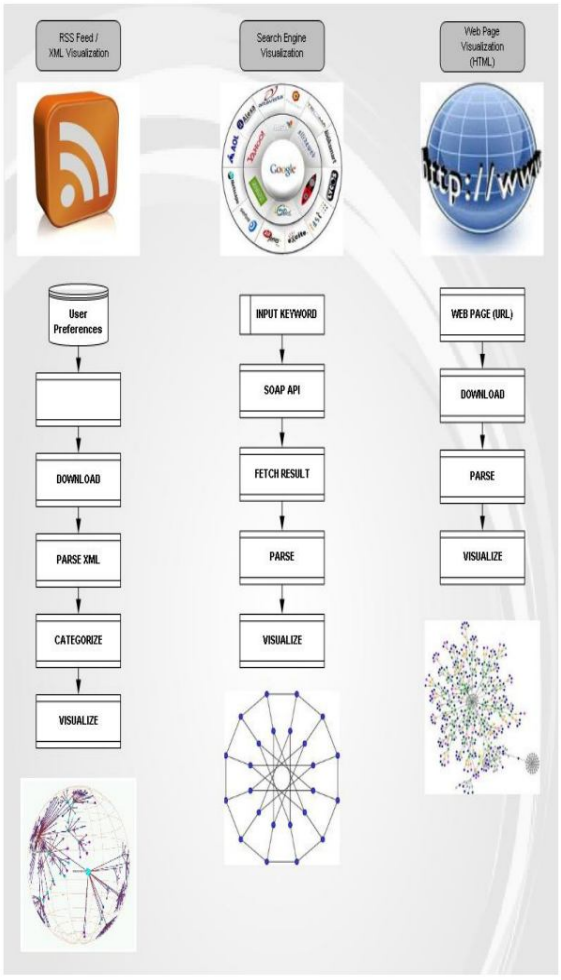
II. OBJECTIVE OF PROJECT

We are developing the existing concept with the improved, efficient and more user friendly GUI with the help of the visualization techniques. So we develop a Web Brower with a difference. Our implementation will help not only to the Expert users but also to the novices. In normal browser we type name of the URL in the address bar and that URL is downloaded. But the 3D browser takes any URL as an input and generates a 3D graph of the whole website. When we type the URL, a root node of this URL is created. And then this URL goes to the Parser. The parser, parse this web page and gives output in the form of the set of the hyperlinks. Corresponding to each link we create a node and it is attached to the root node. In this way the whole 3D graph of the website is generated.

Different color schemes are used for the nodes of different links e.g. text links, image links, video links etc. Advanced search facility is also provided. Moreover as the graph is 3D in nature, the user can rotate the graph as per his requirement.

Basically, our project has three domains:
1] RSS Feed/XML Visualization
2] Search engine visualization
3] Web page visualization (HTML)

III. DIAGRAM



RSS

1. Database of user preferences contains which URL's to download, the time interval for refreshing, category for URL (e.g. Cricket, Movies, Stocks, etc.)
2. Next Block is scheduling (empty box). This is where a timer implemented in java will repeatedly download url data (xml file format) at specified intervals.
3. Download: download the .xml file using java networking
4. Once downloaded, parse the xml file using Nano XML parser to extract required information
5. Categorize the information (feeds from various URLs / sites) based on categories (Sports, Stocks, etc.)
6. Finally visualize in 3D Search Engine Visualization
1. Accept keyword for search
2. Call SOAP API functions using Java Networking again
3. Fetch the results from API – usually in the form of Enumerations or Linked Lists.
4. Parse these results- extract URL and summary from search results.
5. Visualize these results in structured graphs.

Web Page Visualization
1. Accept web page / url.
2. Download HTML page using Java Networking
3. Parse it using HTML parser.
4. There is one block missing that is categorize the parsed elements of a web page and finally
5. Visualize using animated graphs.

IV. MATHEMATICS

SET THEORY:
S= {U, F, M, Fv, E, V}
Where U= {u1,u2, u3, ……} where u is a set of URLs
F={f1, f2 , f3,……} where F is a set of functions for data processing
M is 2D/3D model
Fv={fv1,fv2,fv3,….} where Fv is set of visualization function
E={e1,e2,e3,…….} where E is set of events which may be mouse/keyboard events V will be the visualized model Now,

$$U_{HTML} = f_{download}\ (\mathrm{u1})$$

$$U_{tree} = f_{parse}\ (u_{HTML})$$

$$U_{data} = f_{extractor}\ (U_{tree})$$

$$\mathrm{M} = f_{modeller}\ (U_{data})$$

V. RELATED WORKS

A system that adapts two techniques to map and explore web results visually in order to find relevant patterns and relationships amongst the resulting documents. The first technique creates a visual map of the search results using a contentbased multidimensional projection[3]. The second technique is capable of identifying, labeling and displaying topics within sub-groups of documents on the map.

The system (The Projection explorer for the WWW, or PEx-Web) implements these techniques and various additional tools as means to make better use of web search results for exploratory applications. A projection technique maps the textual result from a

web search (currently, it implements general search, patent search and RSS news feed retrieval) onto a 2D display that can be complemented with visual attributes. With the use of this tool, it is possible to explore groups of highly correlated textual content. Interaction tools, mining functionalities(eg. clustering and classification), and labeling from automatically extracted topics are available.

Evaluation must continue to show how these approaches minimize the deficiencies and maximize cognitive efficiencies of the de-facto standard ranked-ordered list[2]. Toward this goal, there is an attempt to scrutinize core components that all visualizations share to some degree; namely, the specialization of documents and the representation of relationships between those documents. The rank-ordered list has serviced a myriad diversity of information need. However, the generic rank-ordered list is increasingly inadequate for navigation of large quantities of information.

There is evidence of some serious attempts at producing viable alternatives to the list format . The Internet hosts a number of examples that propose cognitive amplification for specific stages of the information retrieval process; for example, query formulation and initiation of search , review of results , refinement of result set , and use of results . Spatial arrangement or position is a salient feature for the representation of document relatedness.

Although relatedness is a subjective matter, a relationship may be made explicit (e.g. an edge between nodes), or implicit (e.g. based on point density). Comprehensive evaluation of the rudimentary spatial component will
expand on this knowledge.

Web search visualization using scatter plot[1] provides the users to search their documents and the results will be visualized in a traditional list based representation and also in a scatter plot according to the documents' last modification date and document type.

VI. CONCLUSION:

The browser creates the 3D graph of the website and it is represented with the help of the powerful visualization techniques. User can view any page at any time just by rotating the graph and clicking on the particular node. Such kind of facility makes the surfing easy, fast, interesting and interactive. This will surely attract more number of users towards surfing.

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