CONTENT ANALYSIS OF HOMEPAGE OF CORPORATE WEBSITES OF MAHARATNA COMPANIES IN INDIA

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Abstract

*The study analyzes the homepage of corporate websites of five public sector undertakings of India that have attained **Maharatna status**. It primarily focuses on the homepage content that makes the crucial first impression, thereby facilitating the citizen-government interaction. The total content and the manner of presentation of the homepage along with parameters like accessibility, usability and navigability have been studied in the research. The study attempts to identify the strengths and weaknesses in presentation of the corporate websites of government companies that are biggest in terms of revenue generation in India. It was identified that these corporate websites are available in both English and Hindi language in order to reach the maximum possible public. It was also found that these websites are yet to exploit the advantage of interactive features like the audiovisual.*

Keywords: Content Analysis, Homepage, Corporate Website, PSU.

Introduction

Organisations around the world are embracing the World Wide Web to reinforce themselves and thrive electronically. Designing a website is one such mode of adding a new dimension to the already existing physical presence of the organisation. A website is a virtual location of the associated organisation with a unique uniform resource locator. It attempts to cater the need of all the intended users through a wide variety of contents such as text, image, audio, and video incorporated in connected web pages of the site. Websites can be used as an effective tool to reach the public and meet organisational goals. A wide range of functions can be served such as communication, promotion and customer relationship. Since a website is the virtual gateway of the organisation, substantial effort and resources are spent on it to increase engagement and outreach.

Corporate website or corporate site can be defined as a site set up by a company on the web which carries information and other features designed to answer customer questions, build customer relationships and generate excitement about the company, rather than to sell the company's products or services directly. The site handles interactive communication initiated by the consumer. It is an informational website operated by a government organisation, business or other private enterprise. Corporate websites offer information to the public about the company.

Homepage: A website's homepage is the first page that users generally see. It contains the newest information or the most basic data, explaining quickly what the page is about and enticing visitors to continue reading. Homepages usually contain navigation menus, text, images and video.

Public Sector Undertaking: In India, a government-owned corporation is termed as a Public Sector Undertaking (PSU). This term is used to refer to companies in which the government (either the federal Union Government or the many state or territorial governments, or both) own a majority (51 percent or more) of the company equity There are 251 PSU companies in India.

Maharatna Status at a glance: In 2009, the government established the Maharatna status, which raises a company's investment ceiling from Rs. 1,000 crore to Rs. 5,000 crore. The Maharatna firms can now decide on investments of up to 15 per cent of their net worth in a project; the Navaratna companies could invest up to Rs 1,000 crore without explicit government approval. For Maharatna status, a company must have:

1. Previously held Navratna status, a level below the Maharatnas.
2. A minimum prescribed public shareholding under the Securities and Exchange Board of India regulations; it should also be listed on an Indian stock exchange.
3. An average annual turnover of more than Rs 20,000 crore during the last three years.
4. An average annual net worth of more than Rs 10,000 crore during the previous three years.
5. An average annual net profit of more than Rs 2,500 crore during the last three years.
6. Significant international operations.

Review of Literature

Haneefa & Venugopal (2010) present an informative preview of the contents and design of national library websites in Asia. They collected data from 28 national libraries' websites. Their analysis shows that the websites of national libraries of Asian countries have a common pattern of content and design. They also found that only six national libraries' websites have deployed one or more web 2.0 technologies.

Banna, Hasan & Meloche (2009) examined the development of interactivity in public health websites. Content analysis was used to map the interactivity in a sample of 30 existing websites along with Heeter's six dimensions (content and availability of choice, effort users must exert, responsiveness to the users, and the ease of adding information, monitoring the information and the system use, and facilitation of interpersonal communication). The results of this study show that the presence of content as well as the availability of choice are the most prevalent options currently found in these websites. However, the overall level of opportunities for interactivity was low. This suggests that online palliative care sites are not as interactive as they could be. Designers are not yet taking full advantage of the range of opportunities that the Internet offers to promote health and the benefits that would come from using interactive tools for more active communication.

Parajuli (2007) evaluated the ministerial websites of government of Nepal to project the overall impression of government websites in Nepal. It was found that of the twenty ministries only seventeen ministries (85%) had dedicated websites and provided information. It was also identified that web features that are critical in fostering government openness, government-government communication, and citizen participation and satisfaction are infrequent or completely absent in the ministerial websites. The study suggests that the government needs to cultivate standards for its website design and exploit the benefits offered by information and communication technologies to promote good governance through electronic government. The government should also continuously evolve the site design techniques to meet citizens' expectations.

Millar & Sammons (2006) analyzed the websites of a randomly selected group of Costa Rican ecolodges to determine how they are using their websites to market on the internet. The study addresses the question of whether or not the ecolodges are using their websites to promote themselves as ecolodges, and if in fact they also promote ecotourism. The results of this study indicate that the ecolodge owners are not effectively using the internet to market their product.

Nielsen (2002) discusses the functional and the compositional aspects of corporate communication on the World Wide Web by comparing company websites with traditional market communication media. She identifies that apart from the informational and attraction purposes, the homepage also fulfils a meta-communicative function, as it indicates where particular types of information may be found on the site. This is the navigational aspect of the website which plays a particularly important role in the use of digital communication. She also found out that the quantity of navigational information on the web is extremely high compared to traditional printed media.

Perry and Bodkin (2000) discuss the results of content analysis of the websites of Fortune 100 companies, carried out to identify the mix of promotional activities on their websites. They performed a content analysis of websites utilizing categories representing a range of marketing communications, including:

communicating product, pricing and dealer/retail location information, related and unrelated advertisements, sales promotion, direct marketing, basic company information and public relations. They found considerable variability in how members of the Fortune 100 used their websites. The websites ranged from very simple ones that focused on basic company information, such as company history, to quite complex websites that incorporated a mix of promotional elements, such as press releases, advertisements, games, free gifts and pricing information.

Objectives and Methodology

Broader Objective
The broader objective of this study is to analyse the homepage content of corporate websites of Maharatna companies in India.

Specific objectives
1. To identify the total number of content.
2. To explore the total space of the homepage.
3. To research the categories of content.
4. To examine the space of various categories of content.
5. To study the manner of presentation of the homepage of corporate websites.
6. To search the accessibility, usability and navigability of the corporate websites.
7. To investigate links to social networking sites.

Methodology
The research method used for this study is content analysis of corporate website of five leading public sector undertakings in India that have attained Maharatna status. This study focuses on the homepage content of these corporate websites. "A content analysis is an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communication". (Kolbe and Burnett, 1991) The use of content analysis includes describing communication content, testing hypotheses of message characteristics, and comparing media content to the real world (Wimmer and Dominick 2006).

Universe: Corporate websites of Public Sector Undertakings.

Sample: Homepage of corporate website of five Public Sector Undertakings of Maharatna status as of January 2013.

Sample size: Homepage of following five companies have been selected for the study
1. Coal India Limited   www.coalindia.in
2. Indian Oil Corporation Limited   www.iocl.com
3. NTPC Limited   www.ntpc.co.in
4. Oil & Natural Gas Corporation Limited   www.ongcindia.com
5. Steel Authority of India Limited graphic   www.sail.co.in

Research Tool: Codebook, Code sheet, Statistical Tool, SPSS, and MS Excel.

Tabulation and Analysis
The homepages of all five corporate websites were analysed for seven consecutive days (at three different time durations the websites' homepage content remained similar for this duration of one week. The measurements of the homepage content have been taken at a display resolution of 1366 X 768 pixels with the help of website and screen measurement tools like MeasureIt! and Screen Calipers. The total space of the homepage of all five corporate websites at a display resolution of 1366 X 768 pixels is 639.74 sq.cm.
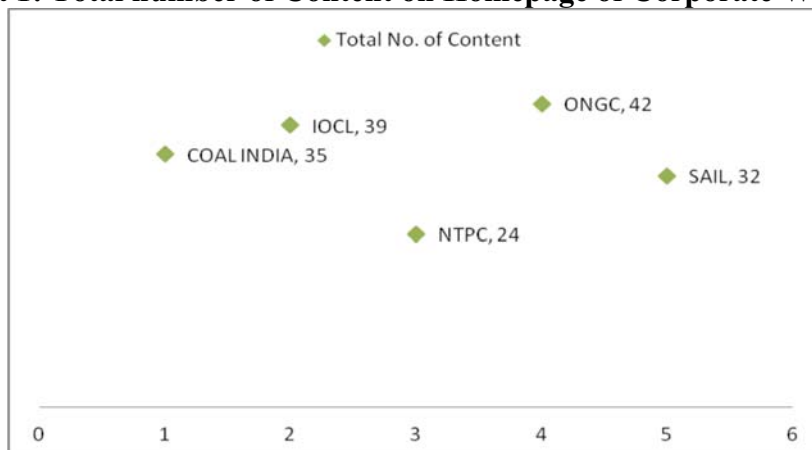
Chart 1: Total number of Content on Homepage of Corporate Websites

Chart 1 depicts the total number of content in all five corporate websites. The corporate website of ONGC includes maximum number of content i.e. 42 and the corporate website of NTPC includes the minimum number of content i.e. 24. The IOCL website is second highest in numbers with 39 contents in its homepage. The corporate website of COAL INDIA and SAIL contains 35 & 32 contents respectively.

Categories and space of content
Text

Chart 2: Percentage of Still Text & Scrolling Text
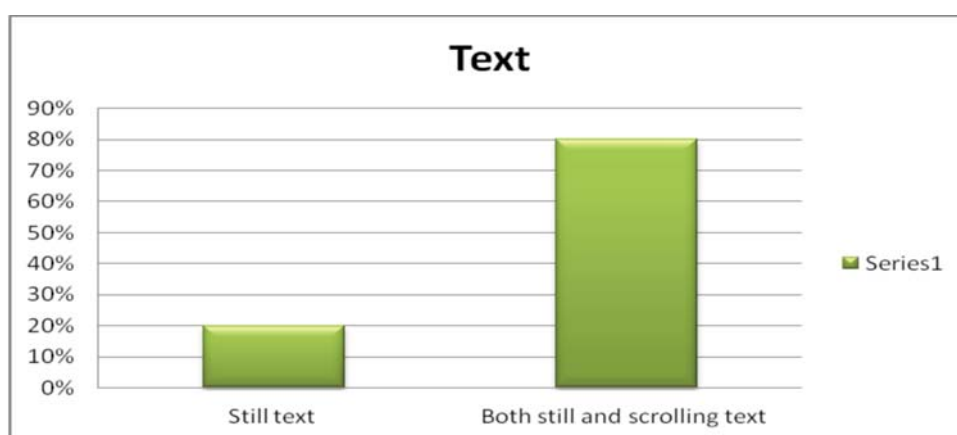
The Text (representation of the written language) in these websites was available in the form of scrolling text and still text. Four out of five websites which constitute 80% of the total websites carry a combination of still and scrolling text. The homepage of corporate website of NTPC carry least text which is present in still form. While scrolling text provided a link to information in detail, still text was present in both forms i.e. with and without links.

Headline

Variable	Availability	Frequency	Percentage
Headlines	Headlines with links	2	20%
	Headlines without links	2	60%
	No headlines	1	20%

Headlines in these websites were used as a phrase indicating the subject information. These headlines attempted to quickly and briefly draw attention to the further information. The headlines of these websites were present in a larger or bolder font or in a different colour from the text. The homepage of corporate website of NTPC didn't carry much text and therefore headlines were not used. The website of COAL INDIA and IOCL provided headlines without link and the website of ONGC and SAIL provided headlines with links

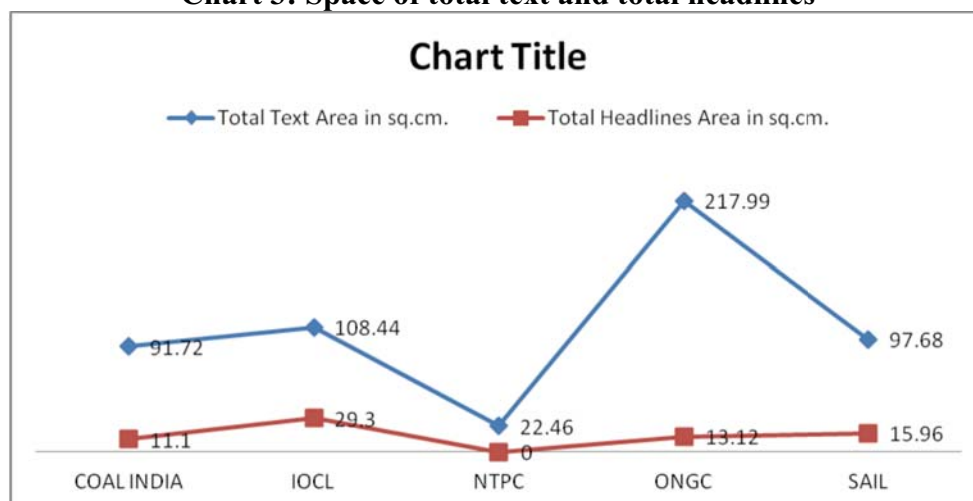**Chart 3: Space of total text and total headlines**

Chart 3 represents a comparison between the space of the total text and total headlines in the homepages of all five corporate websites. It shows that the homepage of ONGC has given maximum space to the text (217.99 sq.cm.) and IOCL has given maximum space to headlines (29.3 sq.cm.). On the other hand the homepage of NTPC has given the minimum space to text (22.46 sq.cm.) and doesn't carry any headline. The total space given by IOCL to its text is 108.44 sq.cm. The homepage of SAIL carries text in the area of 97.68 sq.cm and headlines in the area of 15.96 sq.cm. COAL INDIA provides 91.72 sq.cm. to its text and 11.1 sq.cm. space to headlines.

Images, Graphics, Animation and Audiovisual

| Variable	Availability	Frequency	Percentage
Image	Available with photo caption	3	60%
	No Image	2	40%
Graphics	Available	4	80%
	No Graphics	1	20%
Animation	Available	5	100%
Audiovisual	Available	1	20%
	No Audiovisual	4	80%

Chart 4: Image, Graphics and Animation space in sq.cm. & Length of Audiovisual in minutes and seconds
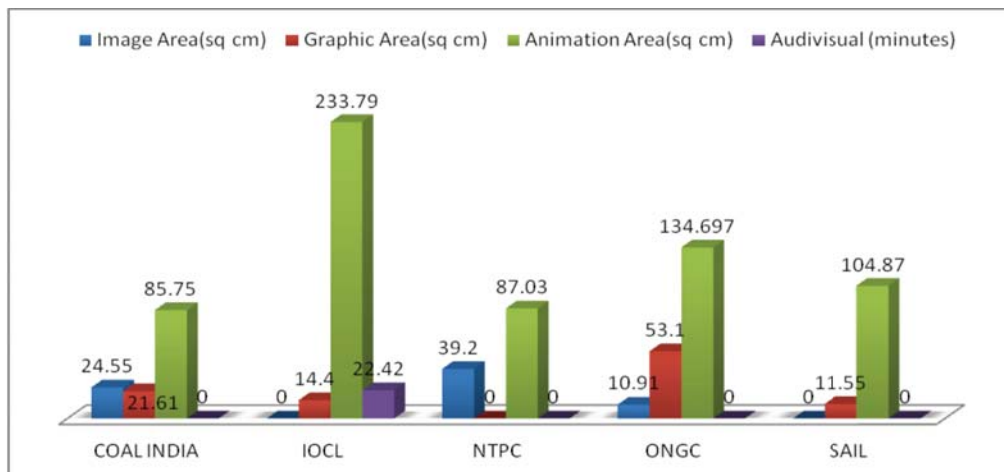
It was found that three websites (COAL INDIA, NTPC & ONGC) carried still images that reflect the real-world scene. The total image space of NTPC (39.2 sq.cm.) is utmost and ONGC (10.91 sq.cm.) is the least. The total image space of COAL INDIA is 24.55 sq.cm. The other two websites (IOCL & SAIL) also didn't lag behind in representation of images but they chose to collect their images and present them in the form of an animation. In fact, all these websites use animation extensively to attract visitor attention. The homepage of the IOCL website has given maximum space to animation i.e. 233.79 sq.cm., and the homepage of COAL INDIA website has provided the minimum space to animation i.e. 85.75 sq.cm., when compared with the animation space of other websites. Besides, NTPC provides 87.03 sq.cm., ONGC provides 134.70 sq.cm. & SAIL provides 104.87 sq.cm. space for animation. Graphics or visual presentations that are generated by a computer are another most used content in these websites. The total graphic space is maximum in ONGC website i.e. 53.1 sq.cm. and is minimum in SAIL website i.e. 11.55 sq.cm. The graphic space of COAL INDIA and IOCL website is 21.61 sq.cm. & 14.4 sq.cm. respectively. However, the audiovisual component could only be found in IOCL corporate website. The length of this video is 22minutes and 42 seconds.

The Header

Chart 5: Area (in sq.cm.) of Header of corporate websites
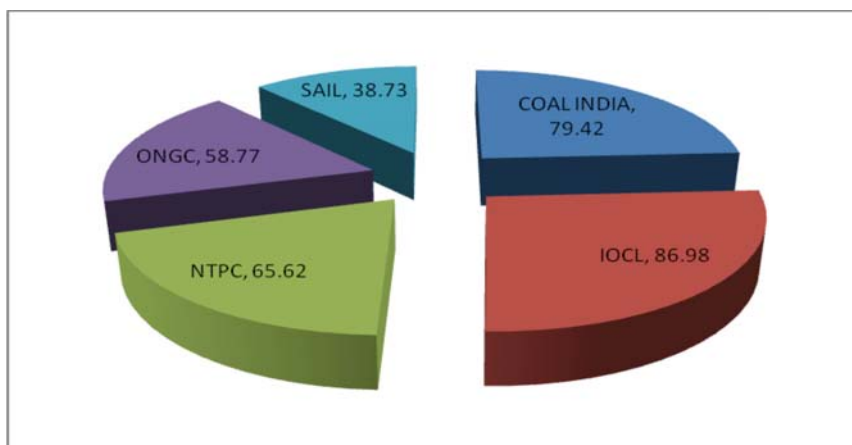
The header of a website is the most important and crucial element that needs to be visually appealing and engaging and at the same time very functional to assist the visitors in navigating the website. The top rectangular shaped area that runs across the top of the web page design, containing a company logo and company name was studied for its . The total space given to header is maximum in IOCL website i.e. 86.98 sq.cm. and minimum in SAIL website i.e. 38.73 sq.cm. The header space of COAL INDIA is second highest i.e. 79.42 sq.cm. and ONGC is second lowest i.e. 58.77 sq.cm. The header space of NTPC is 65.52 sq.cm.

The Footer

Chart 6: Area (in sq.cm.) of Footer of corporate websites
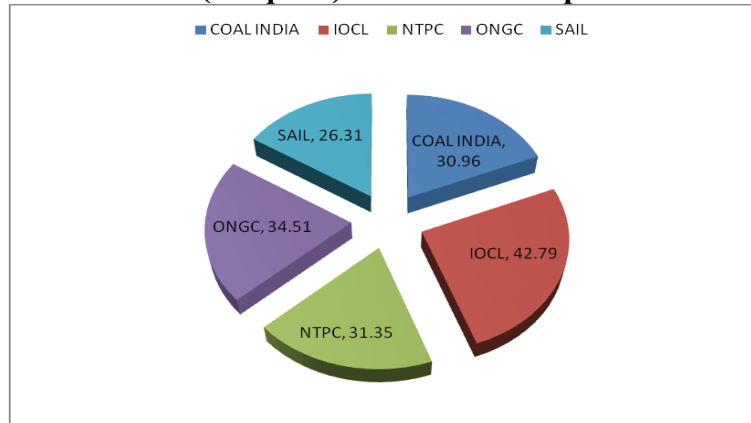
The footer, as its name suggests, is the final piece of content located at the bottom of each page of the website. This area often contains copyright notices, links to terms and conditions and a privacy statement. The purpose of the footer is to signal to the user that they are at the bottom of the web page. Often the footer includes short cuts to key web site content, to save the user from having to scroll back up the page to where the standard menus are located. The footer space of IOCL website is highest i.e. 42.79 sq.cm. and SAIL is lowest i.e. 26.31 sq.cm. The footer space of ONGC i.e. 34.51sq.cm. is second highest and the footer space of COAL INDIA i.e. 30.96 sq.cm. is second lowest. The footer space of NTPC is also quite close to the footer space of COAL INDIA i.e. 31.35 sq.cm.

Manner of presentation
Language

Variable	Options	Frequency	Percentage
Language	Visitors can choose from Hindi & English	4	80%
	Bilingual	1	20%

The most commonly used language on the internet is English. However to reach the majority of people in a country like India, it is important that corporate websites of government sector should be available in both Hindi and Enghlish language. These companies aim to reach the maximum possible people and thus all five corporate websites of Maharatna companies are available in both languages. What is noticeable is that the corporate website of COAL INDIA, IOCL, NTPC & SAIL lets the visitors to choose their language through language selection tabs. On the other hand the corporate website of ONGC is bilingual.

Dominant Colour

		\multicolumn{7}{c}{Colour}	Total
		Red	Green	Blue	Black	Yellow	Orange	White	
Site	COALINDIA	0	1	1	1	0	0	0	3
	IOCL	1	1	1	1	1	1	0	6
	NTPC	0	1	1	0	0	0	1	3
	ONGC	1	1	1	0	1	0	0	4
	SAIL	0	1	1	1	1	1	1	6
Total		2	5	5	3	3	2	2	22

Table title: Website Address * Dominant Colour Crosstabulation

Colour of a websites can catch or distract the attention of the visitors. Colours also decide the nature of the websites for example blue is considered to be professional colour for websites. It is identified that Green and Blue are the two dominant colours used in all five corporate websites. Besides, colours like Red, Black, Yellow, Orange and White are also used to highlight various categories of content in these websites.

Background Colour

Variable	Positioning	Frequency	Percentage
Colour	White	4	80%
	Grey	1	20%

Light shades are believed to be well suited for a web page as compared to dark background colours that can lead to illegibility and confusion. White is considered to be the best background colour as it makes reading on screen easier. The background colour of four out of five websites is white hence they present the best contrast for content. The background colour of IOCL website is light grey which is also appropriate for its content.

Logo Positioning and Company Name

Variable	Positioning	Frequency	Percentage
Company Name & Logo	Top left corner	4	80%
	Banner	1	20%

Logo and company name helps users to identify with and adds to the credibility of the website. Most of the websites place their logo on the top left corner of the website. The results also show that the four out of the five corporate website have their logo and company name on the top left corner. Only the logo and company name of ONGC is positioned in the form of banner.

Typography

Website	Typeface	Contrast	Alignment
www.coalindia.in	Sans-serif (Tahoma)	Legible	Justified and Left Alignment
www.iol.com	Sans-serif (Arial)	Legible	Left Alignment
www.ntpc.co.in	Sans-serif (Verdana)	Legible	Left Alignment
www.ongcindia.com	Sans-serif (Tahoma)	Legible	Left Alignment
www.sail.co.in	Sans-serif (Arial)	Legible	Left Alignment

Designing appropriate typography for the computer screen offers unique challenges as the web designer does not have complete control over how their text will appear on screen. Three components are considered for the study of website typography i.e. font style, contrast and alignment. Fonts are generally divided between two groups: serif and sans-serifs. Serifs are the extra lines added to the main strokes of the typeface. This means that serif fonts on the screen can appear confusing. Sans-serif fonts look cleaner on the screen. Contrast on the other hand is the difference between the colour of the text and the background. Black text on a white background offers the most contrast and makes text as clear as possible. Moreover, text is easily read if it is aligned left. It is found that all five corporate make use the sans-serif fonts in their text. This text is mostly left aligned and offers a good contrast for easy and comfortable reading.

Overall Appearance

Variable	Look	Frequency	Percentage
Overall Appearance	*More visuals and less text*	4	80%
	More text and less visuals	1	20%

Visitors can easily close the website if they find its features confusing. The homepage of a website shouldn't be overflowing with all kinds of information. The attempt should be made to catch the visitor's attention through more visuals which makes understanding easier and interesting. The overall appearance of the four corporate websites can be rated high as they contained appropriate ratio of visuals and text. However, the overall appearance of ONGC can be rated low as it contains majority of text.

Other features: Accessibility
Access refers to information organisation provide to assist public in making contact with the organisation (Ki, 2003, Bortree, 2007). In order to measure the accessibility the contact us section in the homepages were studied. The pages were also checked for placement of RTI tab and application of web 2.0 technology.

Variable	Level	Frequency	Percentage
Contact Us	High	2	40%
	Medium	1	20%
	Low	1	20%
	Not Available on homepage	1	20%

The website of COAL INDIA and SAIL are coded as having high contact us accessibility as they provide physical addresses of offices, contact number or email id of staff members along with name, and designation. The contact us section of IOCL is coded as medium as it provides physical addresses of offices and contact number only. The contact us section of NTPC is coded low as it provides only one central physical address, contact number and email id. The contact us section of ONGC is not available on the homepage

RTI & Web 2.0

| Variable	Availability	Frequency	Percentage
RTI	Available	4	80%
	Not available on homepage	1	20%
Web 2.0	Available	1	20%
	Not available	4	80%
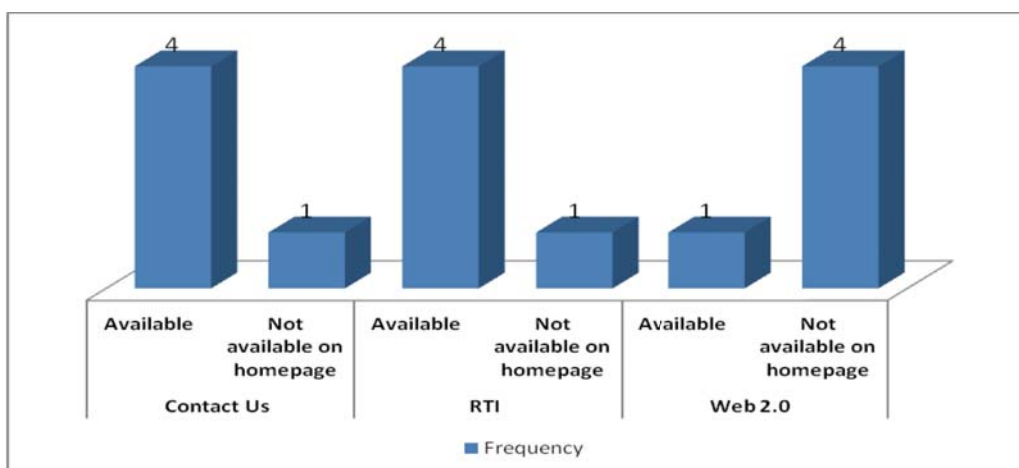
Under the provisions of the RTI Act, any citizen may request information from a public authority which is required to reply expeditiously or within thirty days. Four out of the five website provides links to RTI on the homepage. However the website of ONGC didn't provide the RTI link on its homepage. Moreover, only the corporate website of NTPC provided links to social networking sites like facebook, twitter and youtube and allowed users to interact and collaborate with each other in a social media dialogue.

Usability
Usability refers to ease in use of the website. This is especially helpful for a novice user who doesn't know much about the website.

Variable	Availability	Frequency	Percent
Sitemap	Available on Banner	2	40%
	Available on Footer	1	20%
	Available on Navigation Bar	1	20%
	No Sitemap	1	20%
Frequently Asked Questions	Available on Banner	1	20%
	Available on Navigation Bar	1	20%
	No FAQ	3	60%
Search Bar	Available on Banner	3	60%
	Available on Navigation Bar	1	20%
	No Search Bar	1	20%
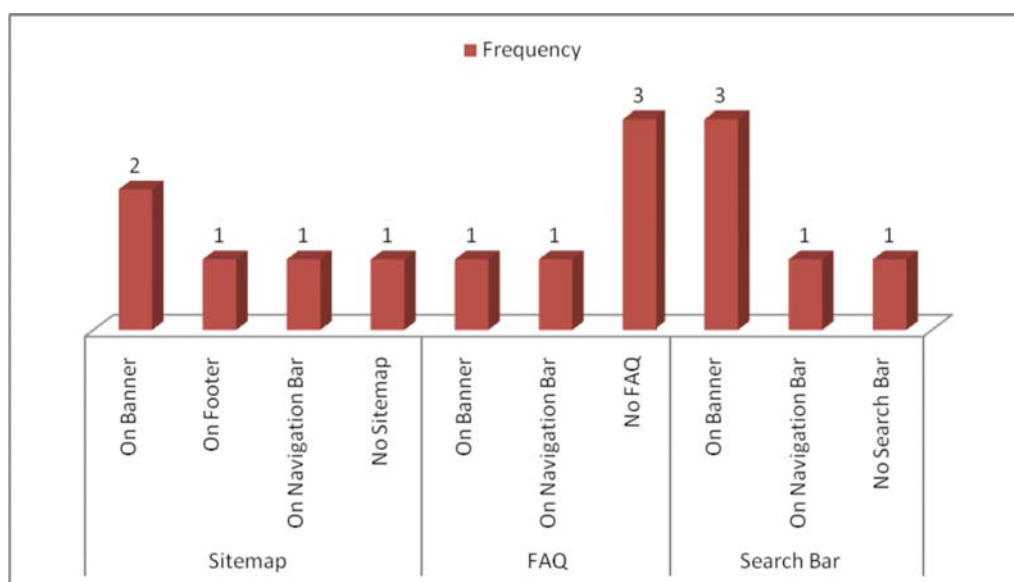
FAQ helps the user to know more about the websites. The researchers have examined the presence of FAQ in two corporate websites and absence of FAQ on the front page of three corporate websites. Sitemap is another usability feature considered here. A site map that provides the bird's eye view of the entire site was available in four corporate websites at different locations. However, it was not available on ONGC website. Search being considered the third usability feature helps users to find information easily by entering the keywords and help the visitors to search for what they can't find on the webpage. Search bars have been provided on the top i.e. either in the banner or in the navigation. Homepages of four out of the total five websites have search bar in them. The homepage of ONGC doesn't carry the search bar as well.

Navigability
Navigation refers to the method used to find information within the website it helps the user to locate and link to a designate page. The website navigation system is an integral part of a website as it helps to keep the visitors engaged and enables them to find the relevant information.

Organisation	Navigation Bar	Navigation Tabs
COAL INDIA	Sidebar navigation	Navigation tabs available
IOCL	Horizontal navigation	Navigation tabs available
NTPC	Sidebar navigation	Navigation tabs available
ONGC	No navigation bar	Navigation tabs available
SAIL	Horizontal navigation, Footer navigation	Navigation tabs available

The corporate website of IOCL and SAIL have used horizontal bar navigation which is considered as one the most popular type of site navigation. The homepage of SAIL also contains footer navigation that is mostly used as secondary navigation, and may contain links that don't fit within the main navigation. The corporate website of COAL INDIA and NTPC have used sidebar navigation in which the icon links have been arranged vertically on the left side of the website. The homepage of ONGC didn't carry any navigation bar. Moreover, all five corporate websites also provide navigation tabs or links placed on individual tabs. Thus, except for the corporate website of ONGC, all other four website exhibit enhanced and easy to use navigability features.

Findings

➢ The homepage of corporate website of NTPC has the lowest number of content and of ONGC has the highest number of content. The homepage of NTPC also carries minimum text and pay more emphasis on pictorial representation.

➢ The majority of text on the homepage of these websites is in still form and a small percentage of text is presented in scrolling form.

➢ The headlines in these websites are clearly demarcated from the text by either providing a different colour to them or by presenting them in a bigger and bolder font. These headlines are presented either with links or without links.

➢ The homepage of corporate website of COAL INDIA, NTPC & ONGC carried still images that reflect the real-world scene. The homepage of COAL INDIA, IOCL, ONGC & SAIL carry graphics as well. Moreover the audiovisual component could only be found in IOCL corporate website. The length of this video is 22minutes and 42 seconds.

➢ All five corporate websites use animation extensively to attract visitor attention. The homepage of the IOCL website has given maximum space to animation i.e. 233.79 sq.cm., and the homepage of COAL INDIA website has provided the minimum space to animation i.e. 85.75 sq.cm.

➢ The website of ONGC is bilingual and the other four corporate websites allow visitors to select their language in either English or Hindi.

➢ Green and blue are the dominant colours present in the homepage of all five corporate website. Barring the light grey background colour of IOCL, the background colour of remaining four corporate websites is white.

➢ The logo and company name of ONGC has been presented in the form of a banner and the rest four corporate websites choose to place their logo and company name on the top left corner of the sites.

➢ All five corporate make use the sans-serif fonts in their text. This text is mostly left aligned and offers a good contrast for easy and comfortable reading. Moreover, the overall appearance of the four corporate websites can called appropriate as they contained more visuals and less text. However, the overall appearance of ONGC can be categorised inappropriate as it contains majority of text.

➢ The website of COAL INDIA and SAIL provides high accessibility with physical addresses of offices, contact number or email id of staff members along with name, and designation. The contact us section of IOCL provides medium accessibility with physical addresses of offices and contact number only. The website of NTPC provides low accessibility as it provides only one central physical address, contact number and email id. The website of ONGC provides lowest accessibility as contact us & RTI section of ONGC is not available on the homepage

➢ The corporate website of ONGC has the lowest usability as it doesn't carry a search bar or any links to FAQ & sitemap on its homepage. The remaining four websites carry a search bar and a sitemap which is most essential in any corporate website. The FAQ feature is only present on the homepage of COAL INDIA and SAIL website.

➢ The corporate website of ONGC exhibit the lowest navigability features as it doesn't carry any navigation bar in its homepage. The other four corporate websites have used navigation bars in different position like top horizontal bar navigation, sidebar navigation and footer navigation.

Suggestions

➢ In terms of accessibility, the corporate website of ONGC needs the most improvement as it doesn't have contact us section and RTI tab on the homepage. This homepage also needs improvement in overall appearance as it carries much more text than the visuals. The homepage of ONGC corporate website appears tedious with long sentences that are used as links for further information. Discussing about usability features, the homepage of ONGC lacks in providing search bar, sitemap and links to FAQ section. Moreover, the navigation bars are also missing in its homepage. Thus, there exists a need to redesign the homepage of ONGC

➢ Looking at the increasing capability of computer technology, these corporate websites should try to attract and engage more visitors with audiovisuals. Audiovisual in a website increases the interactivity with the public and therefore it is important for these websites to use audiovisual in them.

➢ The researchers suggest the application of web 2.0 technologies in the homepage of corporate websites as this will help in reaching a wider audience.

Conclusion

The paper provides an informative analysis of homepage contents of corporate websites that serves as an important portal of information to the public at large. The results are quite significant as they can be helpful in determining how to re-construct the website in a better manner. It can be concluded that though there were merits in these websites, there also exits problematic issues that needs to be worked upon.

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