

Is There a Continental Divide? A Comparison of Web Site Capabilities

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Abstract

The article examines 100 Web sites randomly selected from the Forbes list of top 2000 firms. The sites are drawn almost equally from Asia, North America, and Europe. The paper extends earlier work in web site usability and design by looking at a model of Web site capabilities that includes content, navigation, and interactivity. Significant differences were found among industries represented in the sample and across the three continents. Significant differences in content, navigation, and interactivity were identified, with North American Web sites offering more content regarding financial information, more privacy policies, and opportunities for interaction. A series of managerial guidelines and strategic considerations are presented.

1. Introduction

The Web provides organizations an opportunity to present information regarding their products and services to potential customers, suppliers and investors. The global reach of the Web as well as the ability to provide user interaction with the Web site provide significant opportunities. As a communications medium, distribution channel, and information rich database, the Web faces a challenge in designing interfaces that make sense for specific uses and users. This is particularly important given the increasingly international nature of both users and developers of Web sites. Developing sites that are responsive to user needs is critical for all site designers and managers. For Web site owners to be successful and for users to be satisfied, Web sites need to consider usability, content, and Web site capabilities as key design criteria.

Web sites provide the main interface for consumer use of the Internet and the primary user interface for net-enabled business (Straub and Watson, 2001), information provision, and promotional activities (Schubert, 2002). The Web provides organizations an opportunity to present almost limitless, up-to-date information regarding their products and services, to both customers and partners. Web sites can offer user interactivity including opportunities for feedback and individualization allowing the user to input or initiate changes to the system (Huang, 2005).

In 1998, CACM published an article that examined the use of Web sites by 250 of the Fortune 500 Web sites (Palmer and Griffith, 1998) in which the authors described Web site characteristics and capabilities and suggested that "many organizations are investing their resources to "stake their claim" on the Web as an extension of their current business operations." The use of the Web site offers a direct contact between the organization and its publics. This direct contact with users makes the design of Web sites particularly

challenging. Palmer (2002) identified four areas in his research regarding usability and design; navigability, content, interactivity, and responsiveness. The current article updates much of this earlier work with an international data sample and an increased list of Web site capabilities.

2. Research Model and Methods

In order to assess Web site capabilities, a content analysis of 100 randomly selected members of the Forbes Global 2000 (April 18, 2005) Web sites was conducted in the spring of 2005. The use of content analysis allowed a systematic and objective method for capturing specific characteristics of media. The Global 2000 was chosen as a likely group to have utilized the widest array of technologies in designing their Web sites and represent the growing international dimension of the Web. Content analysis of the entire corporate Web site was utilized to identify a set of characteristics covering five key areas: multimedia use, site navigability, promotional activities, sales and delivery, and product support.

As major international, publicly traded firms, the Fortune 2000 will likely use the Web site at least in part as a platform for communicating with potential investors. In analyzing this key content and capability we looked for the presence on the Web site of a company overview (COOVER), a special section or category for Investor Relations (INVREL), the announcement of the current or very recent share price (SHAREPR), evidence of corporate governance guidelines (CORPGOV), and recent press releases and articles about the firm (PRESSINF) as well as recent or breaking news (HDLINES).

An increasingly popular use of the Web is for career related activities, both for job seekers and employers. In analyzing this content, we looked for the presence of career related information (CAREER) and job postings exchange (JOBXCH). As privacy and legal issues have become important on the Web, we looked for either privacy statements or policies (PRIVPOL) and legal statements or information related to the Web site (LEGAL).

We were interested in examining how much information was available about the site and its designers. We looked for information on site developers and webmasters (WEBMSTR) to see how well they were identified and how easy these key designers and content providers were to contact (WEBCON), whether there was a picture (PICTURE) or telephone contact (PHONE) as well as how recently the site had been updated (WEBTIME).

Navigation of the Web site has been a continuing source of interest. We looked at evidence of a general navigation structure (NAV) as well as specific capabilities such as a sitemap (SITEMAP) and search capabilities (SEARCH), and to view recent pages viewed (RECENTPG).

Interactivity has been proposed as one of the unique capabilities for the Web. We examined this aspect of Web site capabilities by looking for the presence of user feedback options (FEEDBACK), the opportunity for users to register for news or site

updates (REGNEWS), the ability for the user to individualize the Web site (INDIVID), and to generate printer friendly pages (PRINT).

3. Analysis and Results

The 100 company Web sites represented 16 different industries and had company headquarters in North America, Asia and Europe. The Web sites included 40 from North America, 32 from Asia and 28 from Europe.

3.1b Descriptive Statistics

The list of Web site capabilities and the number from the sample offering these capabilities is provided in Table 1. The most frequently utilized capabilities were a company overview (100% of the Web sites), a special category for press information and news (98%), a special category for investor relations and financial information (93%), a contact capability by telephone (96%) or mail (92%) and basic navigation design (94%). An interesting category of capabilities is the use of the Web site to offering information about career opportunities with the company (68%) and the presence of a company-owned job exchange (65%).

A high percentage of sites offered current share price information (76%) and to a lesser extent corporate governance guidelines (67%). Legal aspects (82%) and privacy related policies or statements (75%) were also prevalent. Basic navigation is supplemented by sitemaps (72%) and search capabilities (75%), but only 29% offer printer friendly options, and as mentioned above few offer individualization or recently viewed page options. While 89% of the sites allow the opportunity for user feedback, only 57% offer the capability of registering for news updates, although 74 % provide recent headline news involving the firm and 79 % offer a PR related contact.

	Web Site Capability	Present in Web Sites Analyzed
	Content	
COOVER	Company Overview	100%
PRESSINF	A special category for press information and news	98%
INVREL	Financial information and investor relations	93%
SHAREPR	Current share price	76%
HDLINES	Overview of latest headlines on the first page	74%
CORPGOV	Corporate Governance Guidelines	67%
CAREER	Information about career opportunities	68%
JOBXCH	Job Postings Exchange	65%
LEGAL	Information about legal aspects	82%
PRIVPOL	Privacy policy or privacy statement about the homepage	75%
PHONE	Telephone Contact	96%
WEBCON	Possible to get in touch with a contact person (mail)	92%

WEBMSTR	Person or company who created the Web site	8%
PICTURE	Pictures of the contact persons	1%
WEBSITE	Time of the last Web site update available	4%
	Navigation	
NAV	Navigation Structure	94%
SEARCH	Search capability	75%
SITEMAP	Sitemap	72%
RECENTPG	Overview of "recently viewed pages"	1%
	Interactivity	
FEEDBACK	Feedback possibility for general questions and comments	89%
PRCON	Contact possibility with the Public Relation Manager or Chief Communication Officer	79%
REGNEWS	Register online to be informed about company news	57%
PRINT	Special print function to format the content printer-friendly	29%
INDIVID	Individualize the Web site	5%

3.2 Correlations

To begin our analysis, we examined the correlations among the Web site capabilities and characteristics being studied. When examining correlations, we removed Web site capabilities that were not present in more than 10% of the Web sites. This resulted in the removal of the time of the last Web site update, the name and photo of the webmaster, the ability to individualize the Web site, and the ability to see recently viewed pages. The absence of the first three suggests a change over the period away from direct contact and the development of multiple designers. The lack of ability to individualize the site is perhaps the most surprising, particularly if firms expect users/customers to make multiple site visits. This may reflect the continuing emphasis on the Web site as 'brochureware' for the firm and a lack of use of the medium for interactivity with users.

In analyzing key content and capability we looked for the presence on the Web site of a company overview (COOVER), a special section or category for Investor Relations (INVREL), the announcement of the current or very recent share price (SHAREPR), evidence of corporate governance guidelines (CORPGOV), and recent press releases and articles about the firm (PRESSINF) as well as recent or breaking news (HDLINES). All five of these items were highly correlated.

An increasingly popular use of the Web is for career related activities, both for job seekers and employers. In analyzing this content, we looked for the presence of career related information (CAREER) and job postings exchange (JOBXCH). These two items were highly correlated.

As privacy and legal issues have become important on the Web, we looked for both privacy statements or policies (PRIVPOL) and legal statements or information related to the Web site (LEGAL). These two items were highly correlated.

We were interested in examining how much information was available about the site and its designers. The only information that appeared regularly on the sites was mail (WEBCON) and phone (PHONE) contacts and these items were significantly correlated. Navigation of the Web site has been a continuing source of interest. We looked at evidence of a general navigation structure (NAV) as well as specific capabilities such as a sitemap (SITEMAP) and search capabilities (SEARCH). Sitemap and search showed significant correlation.

Interactivity has been proposed as one of the unique capabilities for the Web. We examined this aspect of Web site capabilities by looking for the presence of user feedback options (FEEDBACK), the opportunity for users to register for news or site updates (REGNEWS), and to generate printer friendly pages (PRINT). These items were significantly correlated.

4. Continental Divide?

We examined the Web sites and divided the firms by the location of the firm's headquarters and by the primary industry in which the firm operated (based on the industry identified in the Forbes 2000 list). There were 16 industries identified among the 100 firms. We found little difference across industries when we performed chi-square tests on capabilities by industry. We then reduced the classification into manufacturing and service industries and again found little difference. It appears that there are few differences across industries-- mainly in the use of press information and the presence of career information and company job exchanges.

There were, however, significant differences among the North American, Asian, and European headquartered firms. The results suggest that there are a number of significant differences among the three locations. There are also significant differences between Asian company Web site capabilities and those of firms headquartered in North America or Europe.

There are significant differences among European, Asian, and North American firms on share price, corporate governance info, press info, career info, company job exchanges, privacy policies, legal information, PR contact, feedback, registering for company news, search, sitemap, headlines, and printer friendly versions.

There are significant differences among all three locations on corporate governance, career info and job exchanges, privacy policy, PR contact, feedback, registering for news, and search. In each case, North American firms have the greatest presence of the items, followed by Europe and then Asia. On the remaining items - press info, legal info, sitemap, headlines, and printer friendly North America and Europe are similar, but each is significantly different from Asia.

5. Discussion and Managerial Considerations

There were several strong correlations among the Web site capabilities. Not surprisingly, there were strong correlations among those aspects relating to investor relations, share price, and corporate governance.

The Internet has almost unlimited potential in the markets of the future. As a direct marketing and advertising mechanism it provides product manufacturers or service providers access to a vast and ever expanding market. Internet technology continues to improve and the audience continues to grow. The potential exists for consumers to interact with companies via the Internet. The findings regarding the use of web sites for career information and job exchanges also suggest an important potential use for Web sites. We only analyzed the English versions of the Web sites, so it is possible that Asian HQ Web sites only have career and job related content on their native language sites. However, since the population is drawn from the biggest companies in the world, it is likely that information of this type would be available in all languages.

Insights from this research can aid Web site managers and designers in creating more successful Web sites. Appropriate navigability, enhanced Web content, opportunities for users to interact with the Web site, and mechanisms for feedback all can enhance Web site capabilities. Web site managers and designers can create more successful Web sites by incorporating these capabilities. Designers should also provide opportunities for users to personalize and customize their experience. Interaction with the Web sites can support mechanisms for feedback and answering user questions. The proper balance among these elements is a recipe for successful Web sites that will satisfy users and keep them returning.

The research provides empirical verification of how top firms throughout the world are currently developing their Web sites. While we did not measure site success, the findings are in line with those of Palmer (2002) who suggested that greater information content is associated with more successful Web sites. Customization and interactivity are key Web site capabilities, and the findings suggest that successful Web sites take advantage of this through opportunities for interaction with site users. Successful sites also provide an opportunity for feedback and maintain some record of that feedback, including the availability of FAQs.

The findings suggest a significant difference in content, navigation, and interactivity across continents and are consistent with the work of Singh et al (2005) that finds cultural adaptations in the design of web sites across continents. When designing Web sites for specific firms, these differences need to be acknowledged, and where appropriate, addressed.

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