

# Evaluating Web Site Design

Pedro Costa  
UNIDCOM - IADE  
Lisboa, Portugal

E-mail: pecosta@hotmail.com

## ABSTRACT

The webpage aesthetics is one of the factors that affect the way people are attracted to a site. But two questions emerge: how can we improve a webpage's aesthetics and how can we evaluate this item? In order to solve this problem, we identified some of the theory that is underlying graphic design, gestalt theory and multimedia design. Based in the literature review, we proposed principles for web site design. We also propose a tool to evaluate web design.

## Categories and Subject Descriptors

J.5 [Arts and Humanities]: *Fine arts* H.5.2 [Information Interfaces and Presentation]: User Interfaces - *Evaluation/methodology, Training, help, and documentation.*

## General Terms

Design, Theory

## Keywords

Web design, Aesthetics, Web, Design Principles

## 1.INTRODUCTION

Websites plays an important role in the communication between people and is also an important corporate tool. [1] Its importance is so significant that web presence is a strategic issue for companies, humanitarian projects, political parties and personal marketing. According to Internet World Stats webpage [2], internet already reaches more than 20% of all world population. This makes Internet a very competitive media, here the importance of aesthetics is growing, as long as approaches based in communication, usability and technique are considered more pragmatic [3].

According to Anders [4], "there are three things to remember about website design: content is king, content is king, content is king. But in order to ensure its primacy, we must present the content in a way that is attractive, orderly, and, if possible, original".

Based in the Design Theory we identified and proposed design

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

SIGDOC'08, September 22-24, 2008, Lisbon, Portugal.

Copyright 2008 ACM 978-1-60558-083-8/08/0009...\$5.00..

principles as a tool for web site design evaluation.

## 2.PRINCIPLES FOR WEB SITE DESIGN

There are a set of principles that may be called aesthetic principles and includes concerns such as **balance, harmony and unity** [5][6]. In fact according to Misanchuk, et al. [6] "Balance, unity, and harmony are three primary properties that designers manipulate in order to create aesthetic experience. When these properties are manipulated in such a way that the effects satisfy people's natural (and conflicting) cravings for order, predictability, surprise and novelty, then designers are creating aesthetically pleasing objects or experiences."

Multimedia and web sites are interrelated and sometimes websites include multimedia components. Consequently, we think it is adequate to include guidelines for web design, which have been developed for multimedia. Consequently, some general principles derived from multimedia design include **simplicity, consistency, clarity of design**. In fact, according to Misanchuk, et al. [6] "Keep it simple; be clear; and be consistent - these three bits of advice are the foundations of good layout. Screens within a given multimedia package should be consistent in all ways, from the level of discourse and style of presentation from one section to another, to the style of graphics used in different places".

## 3.A TOOL TO EVALUATE WEB SITE DESIGN

In order to evaluate web design, we developed a survey based in the principles of Design previously exposed. The scale used was a 5-point scale, where 1 corresponds to the lowest value and 5 the highest.

In a brief description, Design principles are: **Balance (Bp)**, The visual weigh of the elements is balanced in the page; **Harmony and unity (Hp/Hs)**, Elements and pages are organized in order to give a feeling of totality; **Simplicity (Sp/Ss)**, Use only the necessary elements to reach the purposes; **Consistency (Cp/Cs)**, The similarity and repetition allows presenting page/site with uniformity; **Design Clarity (Dp)**, Readability of graphical elements in a page.

In order to understand the quality of a given site (s) it is important to identify other dimensions to decode the quality rating (Q).

Here, the evaluator will analyse in what extent those concepts were used and if they were applied correctly.

## 4.TESTING EVALUATION TOOL

To test this evaluation tool he chosen web sites of Portuguese coffee companies.

Most of these web sites have a simple structure and static information. Two sites includes some dynamic functionalities but in both cases they aren't fully developed.

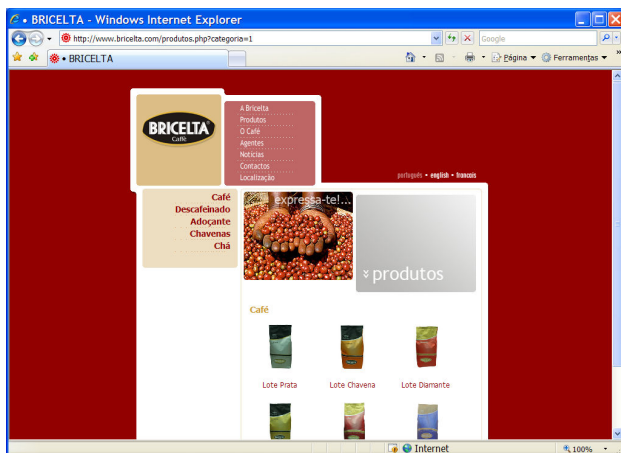
Some of the sites exploit flash technology but in the evaluation items of this tool this doesn't influence the evaluation score. [7]

In the following table is showed the evaluation made by an expert in graphical design. After applying the evaluation tool we asked expert to express what their aesthetic preference is.

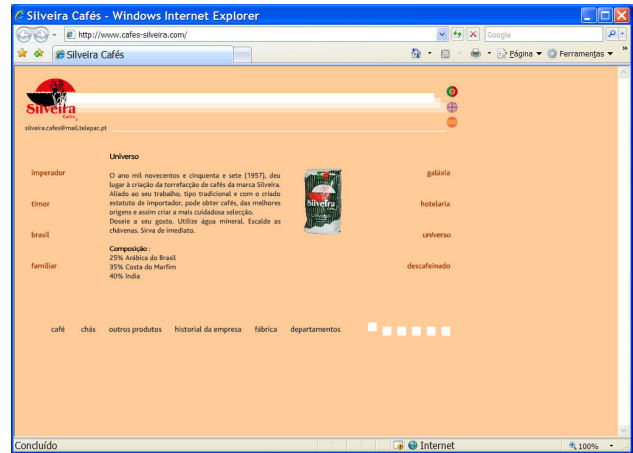
**Table 1 Site evaluation Table**

Balance (Bp)	Harmony and unity (Hp/Hs)		Simplicity (Sp/Ss)	Consistency (Cp/Cs)	Design Clarity (Dp)	Sum	Coffee Trade Marks
	Harmony in the page	Unity across pages					
4	4	5	3	5	4	25	NANDI
1	2	4	2	4	4	17	CAFFECCEL
2	2	2	3	1	3	13	SILVEIRA
3	3	4	2	4	4	20	DELTA
5	5	4	3	2	3	22	NOVO DIA
5	5	4	4	5	5	28	BRICELTA
5	4	3	4	5	3	24	CAMELO
4	5	5	3	3	4	24	BOGANI

In the final he elaborated a site score to compare the evaluation tool with the preference in a base of a more intuitive evaluation and we found some accordance. To determine if there is a correlation between this scale and a more empirical aesthetic appreciation we need to make a wider research.



**Figure 1. Site bricelta.com had the highest rate**



**Figure 2. Site cafes-silveira.com had the lowest rate**

## 5.CONCLUSION

Evaluate Websites according to design principles is a useful but complex job. It requires a good skill in design analysis and a critic thinking.

In this study we could make a site score that shows the ones with more consistent design. With most of the sites we detected usability problems, but we didn't evaluate that item, unless it coincides with some of the evaluation items, like Consistency or Design Clarity.

## 6.REFERENCES

- [1] Costa, P. 2007. *Projecto Webstorm*. Master Thesis, IADE, Inst. Artes Visuais, Design e Marketing - Escola Superior de Design. Lisbon.
- [2] *Internet Usage and World Population Statistics* <http://www.internetworldstats.com/stats.htm>, March 2008
- [3] Costa, C., Costa, P. & Aparicio. 2004. M. *Principles for Creating Web Sites: A Design Perspective*. Proceeding of the 6th International Conference on Enterprise Information Systems - ICEIS (4), pp. 484-488.
- [4] Anders L. 1999. *Great Web Architecture*. IDG Books Worldwide.
- [5] Schwier, R., & Misanchuk, E. (1993) *Interactive multimedia instruction*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.
- [6] Misanchuk, E, Schwier, R. & Boling, E. (2000). *Visual design for instructional multimedia*. Saskatoon, Saskatchewan: M4 Multimedia & Copestone Publishing.
- [7] Anglin, G., Towers, R., & Levie, H. (1996). Visual message design and learning: The role of static and dynamic illustrations. In D.H. Jonassen (Ed.), *Handbook of Research for Educational Communications and Technology*. New York: Simon and Schuster Macmillan.