Chapter 3
Web 2.0 and Interactive Systems:
Aesthetics Cultural Heritage for Communicability Assessment

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ABSTRACT

This chapter addresses the evolution of state of the art interactive systems aimed at the cultural heritage of the Mediterranean area in Europe, especially Spain and Italy. It covers the last two decades of advances in design and considers the human and technological factors in the effective use and assessment of hypertext, multimedia and hypermedia. The chapter introduces basic concepts to eliminate ambiguities and to (re)acquaint readers with the main components of audiovisual technologies that have been vital to the (r)evolution of on-line and off-line cultural heritage material. It goes on to analyze quality in the communication process between potential users and interactive systems by drawing upon essential concepts in software engineering, human-computer interaction, semiotics, interface design and communicability. The main goal is to establish metrics for the heuristic evaluation of the quality attributes that make up an interactive system, taking as a reference the intersection of the formal sciences and the factual sciences. The chapter mainly focuses on dynamic and static audiovisual media, including digital photography, video, and computer animation. Consequently, this process of diachronic study of interactive systems has allowed the author to generate a methodology—Aesthetics Cultural Heritage for Communicability Assessment (ACHCA)—for evaluating communicability in dynamic and static cultural heritage media. The chapter also includes a table for the heuristic analysis of on-line and off-line systems, based on design categories addressing content, presentation, structure, navigation, panchronism and conection of the interactive system. Finally the chapter presents the results of a study of on-line and off-line systems from the 1990s to 2010.

DOI: 10.4018/978-1-60960-044-0.ch003

INTRODUCTION

What we now regard as cultural heritage has been taking shape over centuries, and is a part of our collective memory. The notion of cultural heritage in Europe is a relatively recent one since until the middle of the twentieth century it was referred to variously as 'treasures' or the art wealth of the states. It used to be considered as a collection of ancient objects, with financial value and most of these were stored in museums or other places where they would eventually be exhibited. In 1982, the UNESCO world conference on cultural heritage which took place in Mexico defined the concept of cultural heritage in the following way: *The cultural heritage of a people includes the works of its artists, architects, musicians, writers and scientists and also the work of anonymous artists/ expressions of the people's spirituality, and the body of values which give meaning to life. It includes both tangible and intangible works through which the creativity of that people finds expression: languages, rites, beliefs, historic places and monuments, literature, works of art, archives and libraries* (UNESCO, 1982). Another factor of evaluation of the heritage is the development of cultural tourism during the last decades and especially with the interactive hypermedia/ multimedia systems since then they become financially exploitable goods (Tierney, 2000).

The online and off-line interactive systems have made it possible in the last decade to spread this cultural heritage in a variety of ways, thanks to the different dynamic and static means used for the hypermedia contents and which have taken into account the different kinds of users (Cipolla-Ficarra, 2007a; Cipolla-Ficarra, Nicol & Cipolla-Ficarra, 2010; Sharp, Rogers & Preece, 2007). Now in the new millenium some people responsible for the main international museums claimed mistakenly that inserting the cultural heritage of their museums in hypermedia systems would cut down the numbers of real visits to them. We can still find this mistaken view in the management of cultural heritage in rural areas, for instance (Cipolla-Ficarra, 2007b). However, the truth has been the opposite, since the visits have grown exponentially in the main museums, thanks to the new technologies (Hirose, 2006). That is to say, the bigger the number of virtual visits to the websites about cultural heritage, for instance, the bigger will be the number of real visitors. In our days there is a tendency to revamp the exhibit halls through virtual reality and/or bidimensional or three-dimensional visualization, such as can be the case of the so-called "mixed reality" (Kratky, 2009). We are exploring several design strategies to explore the question of how to communicate historic information outside of the scope of traditional classroom didactics and supporting resources such as libraries and museum collections. In this process of transferring the cultural heritage to the new generations, the communicative aspect is essential.

The communicability of interactive systems entails the highest level of qualitative communication of the contents in an intensive and extensive way (Cipolla-Ficarra, 2008a). It is not only that the objects of the cultural heritage are presented or the information is provided, it is also that the interactive systems foster human knowledge (Veltman, 2006; Ozkaya, 2008; Kumar et al., 2009). Starting from the different design categories and means that make up a multimedia system, the user interested in cultural heritage is not only invited to watch and examine contents, but additionally he/she can open up a way in the acquisition of knowledge, through the analysis of the components, their comparison and the final interpretation of the conclusions. That is, the user can switch from a merely informative role to the formative one, reaching one of the main goals of the hypermedia, where every user is not simply a reader of contents, but rather an editor. It is here where the typical resources of computer graphics and audiovisual communication can be included, for instance in the extensive exploitation of the hypermedia language: the recreation of spaces