Chapter IX
Exploiting Collaborative Tagging Systems to Unveil the User-Experience of Web Contents:
An Operative Proposal

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ABSTRACT

The User Experience (UX) is a crucial factor for designing and enhancing the user satisfaction when interacting with a computational tool or with a system. Thus, measuring the UX can be very effective when designing or updating a Web site. Currently, there are many Web sites that rely on collaborative tagging: such systems allow users to add labels (tags) for categorizing contents. In this chapter the authors present a set of techniques for detecting the user experience through Collaborative Tagging Systems and we present an example on how to apply the approach for a Web site evaluation. This chapter highlights the potential use of collaborative tagging systems for measuring users' satisfaction and discusses the future implications of this approach as compared to traditional evaluation tools, such as questionnaires, or interviews.

INTRODUCTION

Collaborative tagging is the process by which users add metadata to a community-shared content, in order to organize documents for future navigation, inspection, filtering, or search. The content is organised by descriptive terms (tags), which are chosen informally and personally by the user. The freedom to choose unstructured tags is the main distinctive feature of collaborative tagging systems, as compared to traditional digital libraries or other systems of content organization, where the creation of metadata is the task of dedicated professionals (such as librarians) or derives from additional material supplied by the authors (Bennis et al. 1998, Csikszentmihalyi, 1997). Like all socially-generated structures, tagging is an adaptable process; it takes the form best supported by the content, letting users decide the categorization of such content, rather than imposing a rigid structure on it. Collaborative tagging is most useful in an environment like the World Wide Web, where a single "content classification authority" cannot exist and there is a large amount of data content being continually produced by the users.

The widespread success of collaborative tagging systems over the last few years has generated a large collection of data reflecting opinions on, and evaluation of, web contents. In this chapter, we look into the possibility of exploiting this large database to evaluate the user experience (UX) of web sites. UX is a multi-faceted construct recently introduced into the HCI agenda to describe the quality of an interactive system (Garrett 2003; McCarthy and Wright 2005). This construct is used to indicate how people feel about a product and their pleasure and satisfaction when using it (Hassenzahl and Tracktinsky, 2006). Responses such as aesthetic judgments, satisfaction or frustration, feelings of ownership and identity are the most prominent aspects of user experiences investigated in this new, comprehensive, HCI research area (De Angeli, Sutcliffe and Hartman, 2005; Hartman, Sutcliffe and De Angeli, 2007; Norman, 2004). Normally, these responses are collected in formal evaluation settings via questionnaires and/or interviews. Collaborative tagging may offer an interesting alternative, one which is cheaper and less prone to experimental bias. In this chapter, we present a technique to extract semantics from tagging systems, and interpret them to describe the user experience when interacting with on-line content.

This chapter has the following organisation. Paragraph 2 reviews related works on collaborative tagging systems. Paragraph 3 describes three different techniques that can be used to extract semantics from tagging systems. Paragraph 4 reports a method to derive semantics differential attributes from collaborative tagging systems, 3, and its evaluation. Paragraph 5 summarizes the chapter, delineates future trends in the use of collaborative tagging systems for automating evaluation techniques and draws the conclusions.

BACKGROUND

Collaborative Tagging Systems (Golder et al., 2006; Mathes, 2004) offer their users the possibility to index contents for organizing web-related information, sharing knowledge and opinions. There is a growing number of successful web sites which include collaborative tagging, allowing users to index and share different types of contents. Del.icio.us (http://del.icio.us/), for example, specializes on bookmarking, categorizing and sharing URLs, Flickr (http://www.flickr.com/) allows users to tag photographs they own; Technorati (http://technorati.com/) is devoted to tag weblogs; and Youtube (http://www.youtube.com/) allows tagging videos. Other interesting examples are Snipit (http://www.snipit.org/), which offers the functionality of bookmarking sections of web pages, and CiteULike (http://www.citeulike.org/) or Connotea (http://www.connotea.org/) that allow tagging and commenting references to academic publications.