Chapter 4
Colored vs. Black Screens or How Color Can Favor Green E-Commerce

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ABSTRACT
This paper presents the results of an exploratory qualitative study conducted with 26 consumers about their use of computer screen savers. The results show how the use of screen savers remains almost nonexistent. Unknown or taking too long to apply, this feature is not attractive to persons interviewed who do not use it for sustainable development purposes. The paper presents the results of this qualitative study, offering an interpretive analysis of the reasons and factors explaining this type of computer user’s behavior. The paper also discusses the potential of using screensaver functionality in e-commerce websites, particularly in the Mediterranean region. In this direction it looks into how this could be provided by the establishment of two elements - a browser and a website extension, which will be tested in a future online experiment.

INTRODUCTION
In the European Commission, Information and Communication Technology (ICT) contribute to 2% of global greenhouse gas emissions (Gartner, 2007). Their environmental impact is therefore a concern that gradually receives research attention. A principal approach to address the environmental impact of Information Technology is to adopt a Green use — ‘reducing the energy consumption of computers and other information systems as well as using them in an environmentally sound man-
ner’ (Murugesan, 2008). In this vein, in terms of management, information systems and marketing could potentially contribute to the effort to decrease these effects through electronic commerce. In particular, this could hold true with regards to the management of the screen saver for computers aiming to reduce their energy consumption and darken the color appearance of e-commerce websites. The display of a predominantly white interface is in fact more likely to “fatigue” than if the screen is black, or dark. But most of the e-commerce websites visited by French display dominant white colors (Figure 1).

The aim of this paper is to understand whether consumers are likely to become more responsible in playing for sustainable development in the context of electronic commerce, through action on the screen saver of the computer or an equivalent system. A simple feature to implement such as screen saver systems of existing computers can be a first line of research. An exploratory approach seems necessary in the attempt to answer this question. Indeed, despite the influence of the trend “sustainable development” on consumer behavior, there is not to our knowledge a model unified and useful for its study. As a result, the subject remains unexplored, both in terms of information systems or marketing.

By looking at consumer responsibility, we seek to grasp the opportunity for e-merchants, e-learning websites and the actors of information systems with a human machine interface in general, to contribute to the effort for decreasing greenhouse gas emissions. The user action on the light emitted by the screen seems indeed likely to reduce unnecessary power consumption as easy as clicking a button. This could be articulated as the research question: “the ability to click a button present on the browser or on an e-commerce website, changing the appearance of the interface to pollute less while guaranteeing the same content readability through a “intelligent curtain screen saver” after a certain period of inactivity, would it allow e-commerce players to promote reduction of greenhouse gases?”

Our work shows that by improving the appearance of colorful interfaces of e-commerce websites, the proper choice of contrasts between

Figure 1. Presentation of the 10 most visited e-commerce sites in France (01/2010): all have a dominant color white or very clear (source: FEVAD 2010)