Chapter 20
Storyboard and Computer Animation for Children: Communicability Evaluation

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ABSTRACT
The authors present the key elements of the storyboard and computer graphics that must be contained in the computer animations that are broadcast as miniseries and are based on world-known literary works. The first analyses are established to set a differentiation between the contents aimed at the adult and the child audience. Finally, the authors make known the necessary strategies of storytelling applied to computer animation, bearing in mind the time and production cost factor.

INTRODUCTION
Computer graphics constantly improves its algorithms, so that the distance between the real and the virtual is every time less, even disappearing in the artistic context such as can be computer animations or scientific visualization in some exceptional cases (Terzopoulos, 1999; Roble, & Zafar, 2009; Minnery & Fine, 2009; Scharver, et al., 2004; Lu & Zhang, 1998). In the first case, the set of variables to consider are more, because there is a story to be told and the technical errors can even become a part of that story, even going unnoticed to the human eye. Whereas in the second, scientific visualization, errors practically shouldn’t exist, especially in the case of medicine, for instance. An error in the representation of reality of the human organism (shape, color, lightning, etc.) may entail that a mistaken technique is used when extirpating a tumor, for instance.

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Now the stories that are told through computer animation may be based on a literary work or not. Using a literary work has the advantage that part of the audience know beforehand the plot, the characters, the geographical context, etc. However, with the dysfunction of literary texts in the last decades, mainly due to the momentum of other reading devices of digital contents, the lack of interest in the traditional reading of classical works of world literature in paper support (Carr, 2010) the university rules stemming from the Bologna plan (Cipolla-Ficarra, et al., 2011). These are new educational rules which in some public or private universities of the EU prevent a professor from inserting over 80 pages of a same book as mandatory or complimentary reading, especially in Faculty of Educational Studies or foreign literature in Lombardy (Cipolla-Ficarra, et al., 2012). The extreme case may be the nullity of books in the university context of the audiovisual in some Catalan universities, for instance (Cipolla-Ficarra & Ficarra, 2012). The reading has decreased considerably among the new generations and potential users of interactive mobile multimedia, for instance.

We can also find situations where the real television miniseries turn into computer animations. Here we also have another advantage for the understanding of a story, because the characteristics of the main characters are known beforehand, the main and secondary issues of the miniseries, the temporal context in which the events take place, etc. However, the new generations haven’t grown up in front of the television screen, but rather the computer screen.

Besides, until the late 20th century the television miniseries were not broadcast online because of technical reasons (speed of the internet connection), or the cost of the phone services for Internet access. Consequently, in the great cities, we have adult users of interactive systems who have a greater cultural background in reading and audiovisual, compared with children, teenagers and youth who have been in an endo-culturation and trans-culturation process (Styliaras, Koukopoulous & Lazarinis, 2011) different to those existing at the beginning of the new millennium.

Those who since an early age are interacting with computers and wired to the internet are more open to receiving positively the computer generated stories and which are not based on formerly existing stories. It is they who will take more into account the computer graphics aspects (mainly the special effects) in the development of the plot, compared to the adults. The latter will try to establish parallelisms between the development of the script of the animation and the version of the book or the television miniseries, for instance. The special effects for children and/or young people is linked to the consumption of hours in front of a videogame as compared to an adult user.

In this work we focus on the study of a chapter of the television series “The Little Prince” (Figure 1), which is based on an audiovisual adaptation of the book by Antoine de Saint-Exupéry. In it we consider the main aspects of the narrative script. For instance, which are the narrative mechanisms to correctly develop other stories in parallel with the purpose of boosting the attention of the viewer in the computer animations. Also will be presented the techniques and methods used from the point of view of graphic computing (static and animated) coupled with an heuristic assessment of the interactive design. We will focus in the current work on the layout category and in particular in scenes illumination. The episode we will analyze is “B782, the Planet of the Giant” of the series which is made up of 52 episodes of 26 minutes each. A summary of that chapter or episode (in this work, both notions are used as synonymous) can be seen in the current link: www.lepetitprince.com. The chapter has been randomly chosen through a previous draw.