Chapter 36
Design and Behaviour Computer Animation for Children

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ABSTRACT

A study of the three-dimensional design strategies through color, shape, and the audiovisual script for the child audience is presented in this chapter. The authors show the key elements that allow for a balanced combination between 3D design, communicability, and pedagogy. The triadic interrelations are analyzed and evaluated by communicability experts, whose results are presented graphically. Finally, there are the results of the behaviour computer animation of the main characters in the analyzed chapters from a perspective of communicability for 3D computer animation.

INTRODUCTION

The design of three-dimensional characters for a children audience is not an easy task (Cipolla-Ficarra, Quiroga & Carré, 2012) if the copyrights in analogical support material are respected, and also digital of everything that exists down to our days. Besides, it is necessary to point out the differences among characters that are presented for the first time to the potential users of interactive systems or classical audiovisual (Cipolla-Ficarra, 2012) from those which have as a previous support a literary text, for instance. In this work we will focus on a computer animation collection, with an excellent communicability such as the TV series Chuggington (www.chuggington.com). The series tells the adventures of three student trains: Koko (green color), Wilson (it is red) and Brewster (yellow). It has integrally been developed in computer, for the Lodurum company (www.
Lodurum.com). The first collection of episodes contains 52 animations, with an 11 minutes duration (the whole listing in the Appendix and those which have enclosed a star-shaped character (*), means that they make up our universe of study. In each episodes the three learn new things to reach their main goal, that is, becoming expert trains. Their deeds take place in the town of Chuggington.

COMPUTER GRAPHICS AND COMPUTER-AIDED DESIGN: 3D EVOLUTION

From the architectonic point of view it is a city that looks like the graphic evolution of Simcity (www.simcity.com) of the new millennium. Since the interactive entertainment systems, architecture has always played an important role. For centuries architecture was at the service of those people who held earthly power and spiritual power (Cipolla-Ficarra, 1994). This reality turned architecture into a profession with a solid authority with regard to other similar professions. However, with the French Revolution, the reduction of that authority takes place and new professions are seen to appear in the domain of architecture: draftsmen, projectors, builders, etc. The constant and progressive improvement of graphic software, commercial or not, in 2D and 3D, for instance, linked to the diversification in the performance, boosts the context of advance of

Figure 1. Main and secondary characters of the computer-animated series