

The introduction to *Observer Effect – modular interactive installation* presents the circumstances in which multimedia art was born. Due to the advancement of technology the modern media became a way of expression for original and innovatory artistic works, and often the area of cooperation between artists and science fans as well. It is particularly seen in the computer games industry.

The second chapter explains the title of *Observer Effect*, presents inspirations that contributed to the realization of the project, and describes the project's assumptions. Virtual assistants, interactive products called *Tamagotchi*, artistic work by Takayuki Todo under the name of *SEER* (popular at Ars Electronica), the movie *Arrival* by Denis Villeneuve and the book *Blindsight* by Peter Watts were, among others, the inspirations for the project.

The next chapter is a description of coming into being of the prototype of *Observer Effect*. The prototype, named *Cyber Twins*, helped to resolve both ideological and technical problems. The content of the chapter concerns, i. a., the phase of designing the form and searching for graphic design suitable for representation of a *virtual individual* simulating the behavior of living creatures. The design of its behavior was based on the principles of creating cybernetic systems described by Polish scientist Marian Mazur. Every object of the installation became a separate subsystem that can operate independently. This stems from the fact that every object is equipped with its own receptors, effectors, correlator and homeostat. The chapter explains the role that each of these elements play in the whole project and presents technical aspects related to the analysis of image and sound, data acquisition and generation of audiovisual answers.

The chapter entitled *Project expansion* presents the creative process from the prototype to the final version. During this stage, the artistic installation was expanded to include more objects and new solutions related to analysis of sound, among others. The main task at this point of the project was the elaboration of communication and mutual reactions between installation's objects that simulate living creatures.

The thesis is ended with a *Summary* in which the author shares his reflections and hopes related to his work.

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