

## Interaction with a biobot, by Co-Interaction Art Group

Co-Interaction is an Art group dedicated to the implementation of Hi-tech assisted artistic projects, composed by Svetoslav Kosev and Atanas Markov. Their new art installation, presented in Veliko Tarnovo on 15th March, is a natural corollary to two former interactive projects, namely INTERACTIVE GENERATIVE FORMATIONS and VIRTUAL ARENA.



That's how Svetoslav describes the project:

The essential difference between the new project and the previous ones is that in the former action takes place on a two-dimensional plane, on which images are being projected. The objects' aesthetics is pre-defined and the movement of both viewers and participants in the installation is detected by a sensor. Thus, the viewers alter the appearance of the dynamic images on the go and become active part in their construction and perception.

With the project INTERACTION WITH A BIOBOT, we leave the two-dimensional plane and venture into three-dimensional space. The dimensions of the installation event box are 500x500x350 cm. While discussing the project we came up with the idea to imitate a living organism that is able to react to the threat of approaching viewers. This idea is modeled over a behavioral reaction of a group of plants depicted in the movie Avatar. In the movie the protagonist touches a plant which triggers an instant reaction by all other members of the group of plants which withdraw within their roots. To design an installation of the desired scale within the viewers' step-in zone however is quite risky. That is why we decided to raise the whole installation and the objects above viewers' heads, which, of course, is much more complicated as an engineering solution and necessitates the involvement of an expert in the respective field.

The other problem that we had to solve concerned the nature of the object that was supposed to react to the participants' presence and what type of reaction to model. It was at this point that I was reminded of a game children play on the beach. It involved throwing of a small spherical ball that expands in flight but contracts upon impact and squeeze. Later on it turned out that this toy was known in the scientific circles as the Hoberman sphere. We made a couple of experiments with the ball and it turned out that it can be made to expand and contract to pre-defined parameters with the aid of servo mechanisms. Then, on the basis of all the initially considered elements, the whole construction for the installation was designed. Naturally there were some problems within the process of construction. These were primarily related to the electronic circuits and Atanas had to solve them on the spot, which he masterfully did.

All in all, our cooperation in which I contributed with the conceptual and the visual part, Atanas was entirely engaged with the technical part, and engineer Anton Krustev contributed with the construction design, lead to the completion of the project and the new installation.

**Co-Interaction website:** <http://www.co-interaction.com/co-interaction/index.php/en/>

