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Bird Song Diamond installation in Large Space, Abstract

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Authors

Ikegami, Takashi
Vesna, Victoria

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BODY of KNOWLEDGE

Bird Song Diamond installation in Large Space

Takashi Ikegami and Victoria Vesna

We will present and discuss our collaborative work based on the interactive installation Bird Song Diamond. This installation integrates evolutionary biology, artificial life, spatial sound, mechatronic art and interactive technologies. The BSD interactive installation design is based on the patterns of communication within the spatial networks of birds in nature initiated by Dr. Charles Taylor, ecological biologist at UCLA.

The BSD installation was constructed for the Empowerment Informatics Virtual Reality Space in collaboration with Dr. Hiroo Iwata at Tsukuba university (dimensions are 18 (m) width, 9 (m) depth and 7.4 m height) at the University of Tsukuba. Participants can enter the 3D stereoscopic projection of an artificially programmed flock of birds called boids model. Parametric surround sound pointed at specific quadrants of the space also allude at the reality of the experience coordinated with the passing of the virtual flock.

Participants are also invited to fly inside the space utilizing a harness that lifts the person based on the flapping of wings we provide for them. They have markers that track the position of each participant allowing them to interact with the virtual environment and become part of the flock. During the demonstration, participants were lifted and suspended in mid-air using the motion base and at the end of each show, he landed on the ground quietly where a diamond crystalizes from there. A tracking system consisting of twenty ceiling cameras were used to track the positions of program participants. The EMP Large Space is suitable for making larger immersive display with respect to effective screen volume.

Our contribution to the panel, we will be to discuss the advantageous of cross-disciplinary collaboration based on the experience of the BSD installation in relation to embodied and enactive theories of cognition and their implications for understanding evolutionary processes.