



Centre of Excellence in Biological Arts

#### Symbiotica

School of Anatomy & Human Biology  
M309 The University of Western Australia  
35 Stirling Highway, Nedlands, Western  
Australia 6009 M309  
Tel +61 (8) 6488 7116  
Fax +61 (8) 6488 1051  
<http://www.symbiotica.uwa.edu.au>

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## Fits and Starts – Australian artists win international award



Silent Barrage at Exit Art, New York, 2009.

Can the movements of an audience through a mechanical forest help to calm-down cultured nerve cells in a lab thousands of kilometres away?

The (not so quiet) *Silent Barrage* is the work of two Australian artists Phil Gamblen and Guy Ben-Ary. This interactive and aural experience combining art and science has been awarded a prestigious Honorary Mention in Prix Ars Electronica.

*Silent Barrage* – is an art and science collaboration between art researchers from Symbiotica at The University of Western Australia and scientists from Steve Potter's Laboratory for Neuroengineering at Georgia Tech, Atlanta.

The installation consists of thirty two sculptural robotic objects (the 'robotic body'). Each of the objects amplifies and represents the electric activity that occurs in a real biological neural network (the 'brain') that have been grown and nurtured in a Petri dish in Dr. Steve Potter's lab. The behaviour of each robotic object is directly dependent on the signals generated by the neural network. The interface between the 'robotic body' and the 'brain' is done via the Internet. The audience is invited to interact with the neural network by moving through the space completing a closed feedback loop between the robotic objects (and viewers) in the gallery to the neurons in the lab.

The Prix Ars Electronica is one of the most important awards for creativity and pioneering spirit in the field of digital media. Prix Ars Electronica has established itself as a barometer for trends in contemporary media art with artists from over 70 countries participating in the awards. Ben-Ary and Gamblen were awarded mention in the category of Hybrid arts, dedicated specifically to



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today's hybrid and transdisciplinary projects. Primary emphasis is on the process of fusing different media and genres into new forms of artistic expression as well as the act of transcending the boundaries between art and research, art and social/political activism, art and pop culture. The inaugural Golden Nica for Hybrid Arts was awarded to Symbiotica in 2007.

*Silent Barrage* is an arrangement of noisy pole robots and does more than merely amplify the neuronal activity in a culture dish:

"This is a genuine art and science project - in that it is both artistically meaningful and scientifically valid" Ben-Ary said.

"*Silent Barrage* investigates the nature of thoughts, free will, and neural dysfunction."- Phil Gamblen

The work focuses at the bursts of uncontrolled activity of nerve tissue, a typical characteristic of epilepsy and cultured nerve cells. *Silent Barrage* uses audience movements in, and responses to, the architectural space of amplified neuronal activity to feed it back to the cultured nerve cells in an attempt to silence the barrage of electrical impulses.

"We hope that this might help us better understand how to quieten the barrages (activity) in the culture dish, and this in turn would assist in treating epilepsy."- Dr. Steve Potter.

*Silent Barrage* provides an immersive and somewhat overwhelming sensorial manifestation of questions that are at the core of our understanding of the stuff that make us think. Using the presumption of free will of the audience, who chart their own path through the space, this work draws real and imaginary parallels between the person and nerve cell.

*Silent Barrage* was assisted by engineers: Peter Gee, Dr. Nathan Scott and Brett Murray, in collaboration with Dr. Steve Potter Lab (Dr. Steve Potter, Douglas Swehla & Stephen Bobic) at Georgia Institute of Technology. The project was further researched and developed in Symbiotica, The Centre of Excellence in Biological Arts at The School of Anatomy & Human Biology, The University of Western Australia.

*Silent Barrage* has been assisted by the Australia Council for the Arts and the State of Western Australia through the Department of Culture and the Arts.

For more information:

<http://www.symbiotica.uwa.edu.au/silentbarrage>

[http://www.aec.at/prix\\_about\\_en.php](http://www.aec.at/prix_about_en.php)

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For more information or images contact Amanda Alderson on [amanda@symbiotica.uwa.edu.au](mailto:amanda@symbiotica.uwa.edu.au)