

THE  
GAME  
OF  
LIFE

14, 15 and 16 June 2012

## THE GAME OF LIFE FOUNDATION

The Game of Life was founded in Rotterdam in 1999. The Foundation's main objective is to organise projects in the field of spatial reproduction of electronic music. The Game of Life Foundation acts as facilitator in the process of creation, production, programming and publicity of cutting edge spatial sound projects. It curates and produces artistic programmes which showcase a diverse range of high-quality, innovative electronic music projects.

The Foundation offers composers (sound artists/musicians/artists) a unique opportunity to work with a highly specialised Wave Field Synthesis system (WFS). WFS is the first sound reproduction technique which enables the creation of spatial acoustic environments which are true to life using a technique based on physical laws instead of psycho-acoustic principles. This is the only mobile WFS system in the world, and comprises of 192 specially-designed loudspeakers and is dedicated to bringing sonically immersive concerts of innovative contemporary music to the public.

The name "The Game of Life" originates from an independent project first realised by artist and composer Arthur Sauer and organised by Erwin Roebroeks. This project comprised of an 8-channel, 3D sound system which was housed in a custom-designed inflatable tent constructed in the shape of an igloo. The inflatable and mobile tent structure enabled this movable project to travel to a wide range of different locations giving rise to the motto "the stage is coming to you!". The experience of this project led to the next step which was the creative conception to design and build a mobile WFS system, which premiered in November 2006 with the series "The 192 Loudspeaker Experience (Focussed Sound in Sonic Space)".

With this custom-designed WFS system it is possible to create a unique acoustical setting. The flexibility of the system resulting from its mobile design allows it to be physically moved and easily set up at any location. The specially-developed software is open source which enables it to be freely adapted and updated by any interested user.

[www.gameoflife.nl](http://www.gameoflife.nl)

## WAVE FIELD SYNTHESIS

Wave Field Synthesis (WFS) is a sound production technology designed specifically for spatial audio rendering. Virtual acoustic environments are simulated and synthesised using large numbers of loudspeakers. The innovation of this technology is that sound can appear to emanate from desired virtual starting points and move through space in many possible defined spatial pathways. The WFS system from The Game of Life consists of 192 speakers, which are usually arranged in a square formation of 10 by 10 meters. Within this formation sounds can be composed to move *within* this square space, however the interesting point is that it is also possible to move sounds *outside* of this loudspeaker square. So the question is what makes this phenomenon possible considering the loudspeakers are all physically directed inwards.

Using specially-designed software, the composer can programme sounds to move in space and to follow many possible trajectories. A sound could appear to originate from a fixed point and remain there or it could be programmed to move in patterns within and outside of the square formation of the loudspeakers. This possibility of being able to move sounds *inside* and *outside* the direct listening environment offers endless creative opportunities for artists. The composer can also choose to have sound events manifest physically both inside and outside the speaker formation. For example, it would be possible to render the sound of thunder rumbling in the far off distance just as one would experience it in nature! This can be accomplished by simply reproducing the appropriate sound pressure level to evoke such a sonic environment in the loudspeaker square. The "outer" sound waves then are *reconstructed* by multiple loudspeakers. Conventional sound reproduction techniques like stereo and surround *suggest* spatial movements, by perceptually tricking one's brain using knowledge informed by principles of psychoacoustics. The spatiality of WFS, however, is real: the WFS sound field is actually reconstructed physically.

## CONTRIBUTING ARTISTS

360 Soundsystem, Alo Allik, Siamak Anvary, Ángel Arranz, Barbara Ellison, Nick Fells, Funckarma, Joris Geurts, Robert Henke (aka Monolake), Ji Youn Kang, Yannis Kyriakides, Machinefabriek, Makam, Yutaka Makino, Olivier Messiaen, Milo McBride, Miguel Negrão & Bjarni Gunnarsson, Erik Nyström, Arthur Sauer, Wouter Snoei, Kees Tazelaar, Jeroen Visser, Joris Voorn, Trevor Wishart, Iannis Xenakis

**14, 15 and 16 June, from 12 noon – 10 pm**

In the exhibition

*Rita McBride. Oferta pública/Public Tender*

**Wave Field Synthesis Demo by Arthur Sauer / The Game of Life Foundation**

Daily at 4 pm, MACBA, 2<sup>nd</sup> floor

**Lecture "Sound Space: a Critical History of Spatial Music" by Erwin Roebroeks**

Friday 15 June at 3 pm, MACBA Atrium

**More information:**

[www.macba.cat](http://www.macba.cat)

[twitter.com/MACBA\\_Barcelona](https://twitter.com/MACBA_Barcelona)

Organized by MACBA in collaboration  
with The Game of Life Foundation and Sónar



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