Fabio Morreale

Generative Everything 2083 Installation



Art, Music

Author:

Fabio Morreale

University of Trento interAction Research Lab Department of Information Engineering and Computer Science

Main References:

[1] Fabio Morreale, Raul Masu, Antonella De Angeli. "Robin: an algorithmic composer for interactive scenarios." In *Proceedings of SMC 2013*.

[2] Patrik N. Juslin, and John A. Sloboda. "Handbook of music and emotion: theory, research, applications." Oxford University Press. 2010. Generative Everything 2083 is an interactive installation whose auditory and visual contents are generated in real time by two algorithmic agents.

The musical agent composes and plays a tonal music in ambient style. This agent is based on Robin [1], an algorithmic composer that was taught with compositional rules of classical music. At each new performance, Robin applies such rules to mould a number of stochastic processes, which determines the melody, harmony and rhythm of the composition.

The visual agent generates visual compositions that are inspired by fractal geometry and that follow the musical cue. Complex musical patterns result in chaotic movements whereas calm and melancholic melodies result in tender dances of stars and flowers.

The evolution of the composition is determined by a random walker, which randomly roams throughout a multidimensional emotional space in which dramatic, romantic, and chaotic situations alternates. Following the related word in the psychology of music [2], this emotional space is represented in music using five parameters: tempo, mode, octave, volume and pitch contour. On the visual side, alteration of the emotional space will determine the color, dimension, speed, harmony and complexity of the visual elements.

The a-linearity and the non-determinism of the installation allow the system to generate completely new and non-replicable performances. Besides the purely aesthetic experience, Generative Everything 2083 encourages reflections and speculations on possible future scenarios of art, when the artwork will be cocreated by the artist and forms of artificial intelligence. In this context, the artist role is "downgraded": once they had taught the rules to the machine they are precluded to control the actual evolution of the artwork.

https://youtu.be/puA5FtLbG3A



fabio.morreale@unitn.it

Keywords: Algorithmic music, procedural art