



Research > COMPOSING WITH PROCESS: PERSPECTIVES ON GENERATIVE AND SYSTEMS MUSIC

Generative music is a term used to describe music which has been composed using a set of rules or system. This series of nine episodes explores generative approaches (including algorithmic, systems-based, formalised and procedural) to composition and performance primarily in the context of experimental technologies and music practices of the latter part of the twentieth century and examines the use of determinacy and indeterminacy in music and how these relate to issues around control, automation and artistic intention.

Each episode in the series is accompanied by an additional programme featuring exclusive or unpublished sound pieces by leading sound artists and composers working in the field.

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Written and edited by Mark Fell and Joe Gilmore.

Mark Fell is a Sheffield (UK) based artist and musician. He has performed and exhibited extensively at major international festivals and institutions. In 2000 he was awarded an honorary mention at the prestigious ARS Electronica, and in 2004 was nominated for the Quartz award for research in digital music. He also completed a major commission for Thyssen-Bornemisza Art Contemporary, Vienna which premiered at Youniverse, International Biennial of Contemporary Arts, Sevilla. www.markfell.com

Joe Gilmore is an artist and graphic designer based in Leeds (UK). His work has been exhibited at various digital art festivals and galleries. His recorded works have been published internationally on several record labels including: 12k/Line (New York), Entr'acte (London), Cut (Zürich), Fällt (Belfast) and Leonardo Music Journal (San Francisco). Joe is currently a part-time lecturer in the department of Graphic Design at Leeds College of Art & Design. He is also a founder of rand()% , an Internet radio station which streamed generative music. joe.qubik.com

COMPOSING WITH PROCESS: PERSPECTIVES ON GENERATIVE AND SYSTEMS MUSIC #9.1

Two Discrete Generative Systems

The focus of the ninth episode in this series is a project entitled 'Two Discrete Generative Systems' by Mark Fell and Joe Gilmore. The works referred to in the title were developed separately and first heard together at Enjoy ArtSpace, Leeds, UK, on 29 April 2013. The recording presented here is an ambisonic room recording of the event which was open to the public. It is hoped that the works and their combination respond to some of the key themes addressed throughout the series.

01. Summary

Gilmore's piece, presented on four loudspeakers, explores behaviours generated by a flocking algorithm. These behaviours are used to control the frequency and amplitude of four oscillators. The piece is presented as a series of 'studies' of fixed duration followed by one minute of silence. In each study the conditions of the flock are predetermined. Flocking is a description of the group behaviour of living things such as birds, fish and bacteria. In flock simulations, the motion of each agent is dependent on the conditions governing the overall behaviour of the flock, and also on the interaction between autonomous agents. The three main conditions governing movement are avoidance, alignment, and coherence. Although flocking exhibits somewhat chaotic motion, in reality there is a complex set of behavioural interaction occurring between individuals in the flock.

While Gilmore's piece explores tonality with multiple loudspeakers, Fell's contribution by contrast uses a single speaker, centrally placed, playing rhythmic structures with a percussive single sound principally derived from the Linn kick drum. Among the arrangement of speakers a computer is placed on a plinth, this displays a collection of sliders that are used to generate and change the rhythm that is played. Audience members take it in turns to change the sliders and make patterns. The algorithm used to produce rhythmic structures is based around groupings of durations and repetitions of temporal intervals. This simple structure generates a number of distinct patterns.

02. Playlist

00:04 Mark Fell and Joe Gilmore 'Two Discrete Generative Systems', 2013 (119' 56")

03. Bibliography

Craig W. Reynolds, 'Flocks, herds and schools: A distributed behavioral model', *SIGGRAPH '87 Proceedings of the 14th annual conference on Computer graphics and interactive techniques*, vol. 21, num. 4, July 1987, pp. 25-34.

04. Related links

Mark Fell
www.markfell.com

Joe Gilmore
joe.qubik.com

COMPOSING WITH PROCESS: PERSPECTIVES ON GENERATIVE AND SYSTEMS MUSIC complete series
rwm.macba.cat/en/composingwithprocess_tag



05. Credits

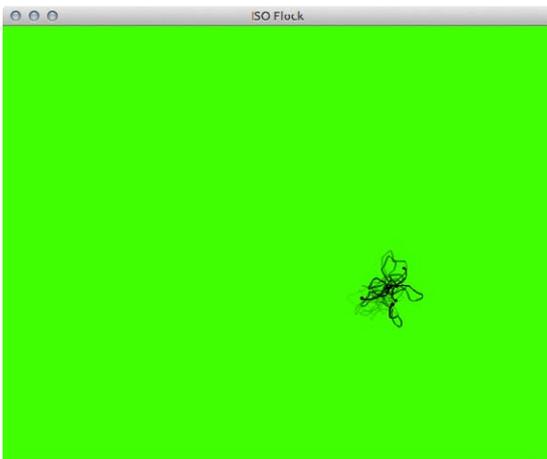
Ambisonic recording by Oli Larkin. Genelec 8020B active speakers kindly loaned by PSL (Project Space Leeds).

06. Acknowledgements

Rian Treanor, Kayleigh Morris, PSL (Project Space Leeds), Zoe Sawyer, Lumen, Oli Larkin, Paul Emery.

07. Copyright note

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[Screen shots from Joe Gilmore's Max MSP patch]