

Musical Motion Graphics – Communicating Live Electronic Music¹

Christian M. Fischer

Abstract:

Live electronic music, including acoustic instruments and electronic sound generation and manipulation, faces specific challenges regarding its composition and performance. There is no music notation available which could equally represent the acoustic and the computer instrument. Due to the often complex musical structure and the possible lack of expressiveness during the performance, live electronic music is not easily accessible for the audience. These challenges are based on a lack of communication.

This article discusses the use of Musical Motion Graphics (MMG) linked to visual communication theory to tackle the above-mentioned challenges. MMG cannot be considered as music notation in the sense of western music notation since the eighteenth century since its aim is not a normative canon or universal validity. Nevertheless, it has a music notational purpose, which manifests in video scores. It offers an open framework of so-called determined ambiguity, allowing the mapping of visual and acoustic parameters. MMG communicates time structure and indicates musical objects and their relations. The exact synchronisation of actions and events of all the instruments involved is possible. An MMG score supports audience understanding of the music by visualising the composition through an intuitively understandable score.

Introduction

The starting point leading to the artistic research project that I would like to introduce in this paper lies almost 15 years back. As a composer and a computer musician, I found myself unable to notate my musical ideas for a live electronic music piece adequately. Live electronic music in this case featured the interaction of acoustic instruments and electronic sound generation and manipulation. Staff notation would meet the requirements of the acoustic instrument only when extended by additional symbols. The electronic instrument, with its almost infinite possibilities of sound generation, could not be depicted in all its fullness. Furthermore, live electronic music faces challenges not only regarding its composition but also regarding its performance practice, especially with regard to its perception. Live electronic music, like other types of contemporary music, often features complex musical structures lacking familiar rhythm and harmony, and is not

easily accessible. Compared to the intrinsic and familiar connections between player, sound and sound source with regard to acoustic instrument performance, in electronic music the live generation and manipulation of sound remains hidden in electronic and digital devices. Plucking a string on a guitar results in a predictable sound; but what does turning a knob or waving a midi glove mean musically? The whole musical idea, the concept of a work, might be hidden behind technical devices. And in the end the enjoyment can evaporate quickly. My artistic and compositional practice revealed that such difficulties arose from a mere communication deficit between myself as a composer, the performer and the audience. Due to my background as a media designer, I found the basis for a solution to the problem in visual communication theory.

This article introduces the outcome of this artistic and scientific journey to tackle the problems of communication in live electronic music: Musi-

¹ The article is based on my doctoral thesis (in Music) *Musical Motion Graphics – a tool to improve live electronic music practice*, defended at the Estonian Academy of Music and Theatre in 2016 (supervisor Professor Kerri Kotta), https://www.ema.edu.ee/vaitekirjad/doktor/Christian_Fischer.pdf.