Orchestral Composition

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Introduction

I've come to realize a strong affinity to orchestral music these days, finding myself more and more drawn to the performance capabilities, temporally and timbrally, that the large ensemble has within its means.

Through attending concerts of ensembles of varying quality, I often wrote notes to myself ab out what it was that made orchestral composition what it was.

I am writing this as I am developing a script library for my own means to exploring the techniques and methods of which I find to be within orchestral music.

Part I – Analysis and Modelling

Observations

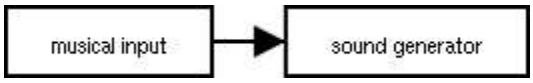
Musical Information

As data for an Algorithm

As configuration for an algorithm

Musical Information Flow

Model One

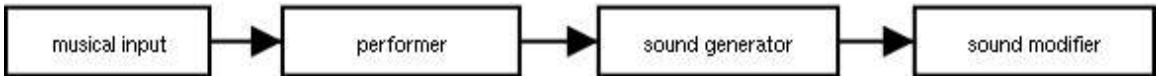


The basic music model includes musical information flowing to one sound generator. The relationship of musical input to sound generators is a one-to-one relationship.

Model Two

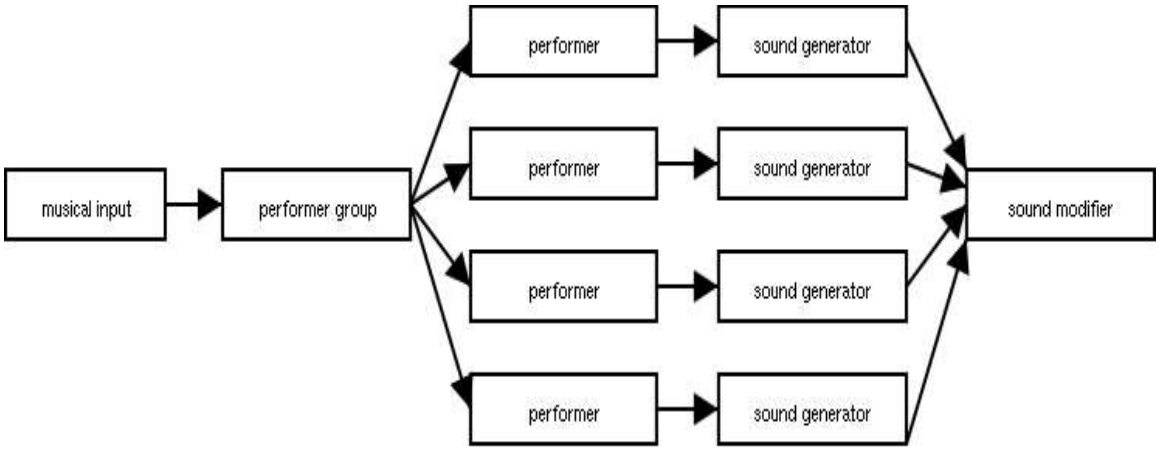
Model Two is only slightly more advanced. Musical input is still mapped in a one-to-one relationship to sound generators. With this model, however, the output of sound generators are mapped to a sound modifier. The sound generators now coexist within a single acoustical "space".

Model Three



Musical data first reaches a performer and is "filtered" by the performer. The performer may have properties set that will affect the musical input. Parameters like spatial location, accuracy, and dynamic range may affect the notes to be played. The performer then passes on the musical data for the sound generator to perform, and the resultant sound is mixed into a sound modifier acoustical space.

Model Four



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Musical Data

Relationships

- is information that, in conjunction with a technique as well as instructions on performance, will determine most of the musical output

Instructions

Relationships

- are given to the performer accompanied with musical data

Techniques

Relationships

- are aspects of a performer or performer group

Instruments

Relationships

- actually create sound

Properties

- instruments have a variety of sounds producing methods and parameters
- not all instruments have the same sound methods/techniques

Performers

Properties

- performers have performance techniques
- given musical data and musical instruction, they apply their own properties to the data

Relationships

- are located in space and have individual properties (no two performers alike)
- have techniques to performs musical data
- have instruments to perform

Performer Groups

Properties

- groups have performance techniques (Xenakis Surfaces)
- one-to-many data relationships

Relationships

- are made up of performers
- take musical data and instructions to perform that data
- have techniques to performs musical data
- are given instructions as to how many should play

Part II – Resynthesis

Orchestral Data Flow

Part III - Techniques

Note Techniques

Durational Change

Stoccato, etc.

Apply Algorithm with Note as Parmater

Tremelo

Trill

Line Techniques

Performer Techniques

Performer Group Techniques

Alphabetical Index