MOTIVE TRANSFORMATIONS BASED ON FINGER MOVEMENTS

Pauli Laine
Nokia Research Center, Helsinki, Finland

In this research report a model is presented, which simulates two hand and finger movement types to make harmonic transformations of motives. The results show that this simple compositional strategy without any additional rules is enough to generate plausible music in pattern oriented style which is based on triad harmonies.

Background

In motional composition strategy (MCS) different types of movements are used for different types of harmonic transformations. Two types of (keyboard playing) hand movement have inspired this strategy. In the modelled situation the chordal pitces are played successively, as a pitch pattern. The fundamental types are a) *whole hand moving sideways* where adjacent fingers are successively pressed down, suitable for scaletype movements and b) *hand spreading movement*, two fingers, ex. thumb and little finger, are moving away or towards each other when the hand itself stays in place, suitable for interval type motives.

Aims

To test the model of motion based motive transformations. Possible uses in the music and what is the effect of this compositional method to musical coherence.

Method

To examine this possible relation between certain movement types and music an computer model (MMS) was devised to simulate the composition using motionally oriented strategy. To enable the focusing on the actual dynamic movement processes only simple contextualization (i.e. culturally oriented enhancements) was incorporated.

Results

Several test runs using the model were made to harmonically process precomposed motives. Pieces generated by the MCS-model were generally very homogenous and fluent and motives were harmonically transposed in “natural” ways.

Conlusions

Simple motional composition strategy enhances the coherence in generated pieces and facilitates the harmonic transformation of the motives.

ISBN: 3-931852-66-0
ISSN: 1617-6847