

Midi Sequencing Project

Tour of the Piano Phase by Steve Reich

Name: Matthew Connolly
Subject: MM32MI
Lecturer: Paul Draper
Due: Friday, 31 May 1996

This piece exemplifies the Piano Phase written by Steve Reich. The Piano Phase is created with a Transform with I have created to time shift sequences of notes. The operations achieved in this project are all Logic specific and are: the transform, automation of screen sets, and an object environment page to select one of several midi sources to be played (ie a Channel Splitter with several inputs and one output.)

The piano phase is all base on one 6/8 bar of semi-quavers. These twelve notes are played by two pianos. The two pianos is achieved in the Project by having two MIDI channels (1 and 2) both being pianos with different panning so that the difference between the pianos can be heard stereophonically.

After a period of time, the second part slowly accelerates such that after another period of time, the two parts are exactly one note apart. The two parts then play in time at this one note phase shift for the same period of time, and the process repeats until the two parts are back in phase again.

A Transform is used to create the very slow acceleration. In my version it is not an acceleration but an exact tempo change such that, for example in the 5 bar phase, the second part plays 61 notes in the time that the first part plays 60. The transform is based on the default double speed transform which changes the position and length of every note to half its previous value. For the given example, (5 bar phase) each note's position and length is changed to 60/61ths of its original value.

Screen sets are used to give the operator a tour of how the phase works and let them listen to it. The screen sets are automated by having a screen set fader controlled by a designated controller and inserted as an instrument in the main arrangement. Sequences are used on this track to trigger the screen set changes at various points during the presentation.

The sequence of screen sets shows the theme of the work with credit to Steve Reich and then explains how it works. Following this, the sequence demonstrates what the two

parts sound like when they are played together and when the second part is shifted by a multiple of one note. An example of the phase based on a five bar period is played and the computer displays the sequences which construct it. After the five bar phase, an twelve bar version is played. The twelve bar is much longer, and has a much more hypnotic effect. The sequence ends with a credits screen with a bit of a plug for me.

The screen set which displays the parts played by multiples of the semi-quaver has a complex environment page happening. In reality there are twelve versions of the phase playing simultaneously. The original is routed to the first part, and all of them are routed to the second part through an array of transformers and cable switchers. There is one master fader which selects which of these channel switchers will feed the second part. The array of transformers converts the output of the master selecting fader to cable switching controls specifically for that row in the array. For each row there are three transformers and the cable switcher. The first transform converts any desirable message from the master fader into a separate message. The second transform converts anything else into a MIDI message which will deactivate the channel switcher, and the final transformer converts the intermediate controller to a MIDI message which activates the channel switcher.

In conclusion, I am happy that this project demonstrates my ability to use screen sets with automation, transforms to modify sequences, and the Logic environment to control the routing of MIDI data to an instrument.