Interpose
for guitar and computer generated tape
Charles Nichols
Interpose for guitar and computer generated tape (1995/1999)
14 minutes 30 seconds

Interpose is a study in the interposition of gestural content on the local and structural level. Materials are introduced on their own and then incorporated into the overall texture, or taken from the texture and elaborated upon within their own sections.

The pitch content is taken from rotations and transpositions of a row built from trichords and tetrachords, which themselves are the basis for the harmonic motion of the piece. The row also serves as a skeletal pitch structure for the piece, providing the pitch levels for each section.

The tape part serves as a timbral extension of the guitar part, as if the resonance of the guitar is being transformed. The timbres of the tape part were created with instruments written in Common Lisp Music which use a hybrid approach to additive synthesis.

Building on the long tradition of additive synthesis, various conventional synthesis techniques are used to reconstruct the individual partials of a sound. The frequencies and amplitudes of the individual partials of an analyzed sound file are converted to percentages of the fundamental frequency. Then the frequencies and amplitudes of various types of unit generators are set to these values and added to create a spectrum related to the original sound source, but exhibiting the distinct characteristics of the chosen synthesis technique. In addition to sine wave resynthesis, frequency modulation, formant filtered pulse train subtractive synthesis, and Karplus-Strong plucked string physical modeling instruments are used to generate each partial of the resynthesized sound, producing a pure steady-state, spread, scattered, and plucked timbre, respectively. Furthermore, the frequency, amplitude, panning, distance, and reverb of each instrument are controlled by envelopes for each partial, providing global control over the musical behavior of each partial of the resynthesized sound.

Key to notation:

• snap pizzicato

• let vibrate

≠ tremolo (with fingers)

🎵 (•) bend note

🎵 glissando
Interpose

for Mesut Özgen

Charles Nichols

A

Seamless, Sharply punctuated d = 60

Tape

always p

always ppp

Guitar

sffz ppp

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B
Smooth, Flowing
Like A, With jarring bends
Like B, with increasingly insistent interruptions.
Like C, With increasingly persistent glissandi
I
Sharp attacks

always $\text{ff}$
Summation, Reflective