Germán Toro Pérez
Rulfo/ecos I
for violoncello and live electronics
2006

Technical rider
(March 2022)

Equipment

– Computer and interface (2 in/ 7 out) with software Max 8
– Mixing desk (2 in / 7 out)
– 7 high quality loudspeakers, five of them on stands, two of them on the floor or on low stands.
– 2 high-quality microphones: 1 condenser cardioid, (e.g. DPA or Neumann), 1 contact
  microphone (e.g. Schertler).
– Midi fader controller (8 fader)

Max patches

For a performance from a separate patch please use
"Ecos_I_5xVerd+Fidd_2022_7ch_Concert.maxpat"

The "remote" version "Ecos_I_5xVerd+Fidd_2022_7ch_Concert_Remote.maxpat" is to be used
only in combination with a master patch enabling/disabling different patches.

The patch "SF_Player_ecos_I_Vlc_22.maxpat" is intended for rehearsals of the electronic part
without a cellist. It contains recordings by Roland Schueler done during rehearsal sessions
previous to the premiere.

Preparation

1. Set loudspeakers and routings according to the subpatchers "Raum" and "INPUT-
   OUTPUT_Verd".
2. Route the microphones to adc~ 4 and 5 according to subpatch "INPUT-OUTPUT_Verd". Mix
   and adjust the input levels in order to have a good incoming signal.
3. Select your MIDI controller (e.g. BCF2000), and eventually adjust the arguments for ctl
   numbers in the subpatch "MIDI".
4. Set Max dsp to 1024/64 (best for fiddle~).
5. Turn your dac~ on (ESC key).
6. Go to cue nr. 1.
7. Open your master fader (nr. 8). You are ready to start.

Performance

Follow the indications in the score:
– Numbers in a circle indicate cues (right arrow key).
– Triangles downwards indicate the places where the analysis/resynthesis is done (minus (-) key).

The exact moment for triggering the analysis/resynthesis is fundamental and depends on the way the specific sounds are performed by the cellist (dynamics, color, timing). Therefore, much care has to be given during rehearsals in order to obtain a well-balanced synthesis sound, not to loud or shrill, not to soft.

At the beginning of the piece, the resynthesis sound will be fade in *dal niente* using fader nr. 6 according to the indication in the score. The master fader (nr. 8) and the fader 1-5 must be opened before.

At the end of the piece, a gently, natural fade out of the electronics will be performed using master fader nr. 8. Take the time you need. It is possible to lower the dynamics imperceptibly before in order to avoid too long fade out times.

Computer keyboard

Key name	ASCI code #	Function
Concert patch "Ecos_I_5xVerd+Fidd_2022_7ch_Concert.maxpat"		
esc	27	dac~ on/off
arrow right	29	next cue
minus (hyphen)	45	trigger analysis/resynthesis (live)
e	101	clear fiddle~ (empty) and "verd"
Sound file player patch "SF_Player_ecos_I_Vlc_22.maxpat"		
0	48	stop sound file
1	49	play sound file 1 (section A)
2	50	play sound file 2 (section B)
3	51	play sound file 3 (section C)
4	52	play sound file 4 (section D)
5	53	play sound file 5 (section E)
6	54	play sound file 6 (section F)
space bar	32	pause / resume sound file

Description:

The patch contain two basic modules:
– Analysis/ resynthesis using the fft analysis object "fiddle~"[1], an oscillator bank with 8 voices and a stereo chorus.
– "Verdichtung" (VRD)[2]: it consists of a cascade of delays superposing up to 14'641 delay lines and generating a slowly transforming sound texture from the incoming signal.

The analysis/resynthesis module generates a 2-channel freeze out a snapshot of the incoming violoncello signal. This freeze is played directly through the two front loudspeakers close to the player. A mono mix is routed sequentially to one of the five VRD modules according to the cues. Each of these modules is linked to one of the other five loudspeakers surrounding the audience. Thus, in each section, the slowly transforming sound texture circles the space once.

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[1] Originally programmed at CNMAT, the current version was written by Völker Böhm.
[2] Written by Wolfgang Musil, Vienna.