

*Composition for cello and DSP.*

*Cello: Eelco Beinema*

Cello player, computer & software for part two ('Boog') real-time pitch shifter (DSP).

'Bow & Arrow' is the third study which I have created with aid of the CAC II compositional program. The first part of the composition is based on the Henon-2 attractor plus some other fractal calculations (Mira fractal). From this rough material an ART-2 (Adaptive Resonance Theory) neural network builds up a number of categories of different musical material. My aim was keeping the musical material together to build up phrases and harmonies and not just to generate separate notes with separate properties.

The second part of this study makes use of a pitch shifter. The sound of the slowly bowed cello is manipulated by the pitch shifter and added to the original sound ending the composition in a crescendo. Here it's no longer possible to hear the different layers of sound, what's left over is a dense cloud where the separate micro tonal shifts (within a one cent margin) are processed by a fractal calculation. In this second part the spatial movement of the sound is closely connected with the sound manipulation. For the CD recording I again used the Roland RSS system in an attempt to capture, these movements.