

The Search for the Succinct: Live Coding Practice as Research

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The Search for the Succinct: Live Coding Practice as Research

Andrew R. Brown

There is an aspiration and challenge in live coding to control many aspects of the music during the performance as possible. Therefore, an important aspect of developing the practice is the search for efficient and expressive musical processes and their computational representations. In this talk I will outline some of my ongoing research into psychology-inspired algorithmic. The techniques build on a Gestalt psychology heritage. In keeping with this, the use of these processes in combination amounts to more than their sum. In implementing these techniques I have built on previous work on live coding methods and utilised libraries and design patterns from the Impromptu environment. The techniques are focused on symbolic music making in a tonal and metric setting. They are based on several principles. 1) Proximity: Implemented as a Gaussian walk through musical space: pitch, dynamic, duration, etc. 2) Range constraint: That creates a kind of 'elastic band' force that increases with the distance away from the mean. 3) Structural tones: Defining and probabilistically moving toward important points in the harmonic and/or melodic space, that can provide points of climax, variety and resolution. 4) Process: A tendency to repeat musical elements including pitch intervals, note durations. Hierarchically applied to sequencing musical segments. 5) Closure: Identifying degrees of stability that can indicate opportunities for changes (in contour, harmonic context, texture, and so on) and points of rest or ending.

Author Bio:

Andrew R. Brown is an active computational artist working in music and visual domains. He is Professor of Digital Arts at the Queensland Conservatorium of Music, Griffith University, in Brisbane, Australia where his work explores the aesthetics of process and often involves programming of software as part of the creative process. In addition to a history of computer-assisted composition and rendered animations, Andrew has in recent years focused on real-time art works using generative processes and musical live-coding where the software to generate a work is written as part of the performance. He has performed live coding around Australia and internationally including in London, Copenhagen, and Boston. His digital media art work has been shown in galleries in Australia and China. For more visit <http://andrewbrown.net.au>