Physical interaction and interpretation in the live generation of musical scores

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this presentation is available at:
http://rhoadley.net/presentations
Three Streams

~ automated composition

~ physical computing

~ music notation
Why?

~ to develop and exploit an understanding of what happens when we compose and perform, including the interaction between composer and performer via notation

~ notation is in particular a highly complex technical, creative and social phenomenon
Scores, notation, art

Richard纲:ley, Four Archetypes, 1994

Wassily Kandinsky, Komposition 8 1923

Cornellus Cornelis, Treuks, 1968
Richard Hoadley, Four Archetypes, 1994
Cornelius Cardew, Treatise, 1968
Why?

~ my interest in physical computing is related to an interest in how music performance works from a somatic perspective (it also refines and extends the creative imagination)
Other issues

~ NOT (yet) the computer as agent (machine learning)

~ notation: "a way of making people move, of getting them to be engaged in musical activity" (Tilbury/Cardew)

~ complexity of score, sight-reading (prima vista) and improvisation
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Brian Ferneyhough, String Quartet No 2 (1980)
AUTUMN LEAVES

J. ANDERSON

[Music notation]

Bill Evans - "Round Up" (1959)
Performances
Museums, Interfaces, Spaces and Technologies Conference, 2010, Cambridge UK
The Fluxus Tree @ Phase Transitions, Cambridge, 2012
Three Streams, Cambridge UK, 2013
demonstration
Next Steps

Physical
- the interplay between 'gesture' and 'touch'. How and why do we need our hands to control some things in detail? [video =>]

- finger, hand and gesture recognition

- some gestures are full of meaning, others should be ignored. How to tell the difference?

Musical
- multiple parts all generated live: 'group' structured improvisation

- rhythmic synchronisation across parts and groups

- dynamics, phrasing, annotation: more use of augmented score features and experiments in how they can be used

- investigating the balance between composition, performance and improvisation

Technical etc.
- machine listening

- live coding of 'real' performance

- therapeutic uses (gismos)

- pedagogical uses, maybe particularly support for sight-reading and improvisation
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Thankyou

~ any questions?

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