

Digital Shoreditch

Information Dynamics Installation

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June 23, 2011

1 How it went

1.1 Reactions of visitors

Initially some confusion, but after we learned to present it properly, then generally positive reactions. We would ask everyone to step out of active space before explaining the ideas behind it and how to use the system.

Default unguided response - walking about, waving arms, dancing—*fast* movements, *rhythmic* movements. We had to explain that interaction occurs not on the time scale of the sounds, but on a slower time scale.

Types of behaviour - solo, collaborative.

Timing controls a bit complex and also too easy to mess up timing. Gesture framework is ok though.

1.2 Performance and reliability of technology

Need to walk out and in to ‘rebirth’ voices after restart is annoying Need a way to limit the number of voices and valid ids effectively Prolog part is getting flooded with tracking messages Matlab part is performing ok when limited to only a few transmits per second, but: - no time for scatter plot update! - timing out problem is bad Loudness-height link needs calibrating to height of person Proper 3D calibration needed to allow for tilt. Use height of bounding box more effectively?

2 Future directions

2.1 Writing up

Submit a paper to, e.g., NIME. Emphasise high level of control—we exercise control over *statistical structure*.

2.2 Improving the user interface

Make it easier for users to recognise which voice they are generating. Remove height bias (detect ground plane). Occlusions are a problem: mount the kinect higher?

2.3 As a compositional tool

A more ‘task oriented’ approach? Eg, creation of a texture, creation of a melodic line, etc.. 3D body gestural control not really needed. Could make controller with two manual controls, hand trackers.

2.4 Other parameters to control

Short-term variables like note duration, IOI etc. Longer-term dynamics, like a chord progressions. Variables which *modulate* the output of other voices, eg tonality/harmony processes. Requires better pitch representation for voices so that harmonic changes can be effected without modifying the outputs of the voice processes.

e.g. voices produce scale degrees. synth units share a global scale. tonality process modifies global scale. Should we implement modulation via wholesale transposition or via minimal modification of pitches?

2.5 Studying the behaviour of users

Experiment to observe how people move in the information space under various conditions: (a) as a solo voice; (b) collaboration with fixed virtual voice; (c) collaboration with another human.

2.6 Performances

Ask John Eacott about possible venues and state of live score code. Performance with dancer? Ask Tim or Di. Performance with live scores and musicians, e.g. string quartet.

2.7 Sequencer plug-in

Ask Chris Cannam about this.

Core algorithms as engine, service or component Send Marcus’s thesis and stuff about experimental aesthetics to Henrik.