Composition and Performance with the Fragment String

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The Fragment String

Digital music instrument
Reinterprets and reflects upon instrumental + ambient sound

Acoustic live sampler =>
granular resynthesizer with GameTrak controller

Simplicity of design

5 years of musical practice
Motivations

- Composing for the laptop orchestra
  - Easy to learn + understand in short time
- Provide interesting sonic opportunities
  => musical opportunities
- Examine nuances of captured sounds
Design

- Continuously buffer last 10 seconds of acoustic input (microphone)

- GameTrak strings control playback volume, buffer position, pitch shift (3-axis control x2 independent buffers)

- Low-threshold compressor => amplifies background noise & system noise to audible levels if no instrumental input
Design

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Design + Musical Practice
Design
Design:
Simple
Design

3 axes

volume, time, pitch

timbre

type of input, presence of input
Techniques

Hold in place
Play back (arbitrary speed)
Alternate between strings
Pass sound between strings
Play back ambient noise
Design:
Simple
Design:
Simple

Yet, depth of musical opportunities
Musical Practice
Musical Practice

7 works over 5 years

Multiple composers/performers/ensemble settings

Composition <=> improvisation
Muted Voices (2012)
Muted Voices (2012)
Fragment String (2012)
Side Two (2012)
Telematic Improvisation (2014)
Search for Life (2014)
Improvisation for Trumpet and Fragment String (2016)
Improvisation for Trumpet and Fragment String (2016)
Meeting (2016)
Conclusion

Fragment String
Granular sampling instrument based on GameTrak

Instrumental + ambient noise sampling

Design has allowed exploration of different performance scenarios

Suitable for small to medium-sized ensemble

Improvisation + composition
Looking Forward

Extended examination of NIMEs in musical practice
Successes & failures

Longitudinal studies
Musical practice over time

“Latitudinal” studies
Musical practice across differing contexts
Tak!

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https://ccrma.stanford.edu/~spencer/fragment-string/