

IMPRO

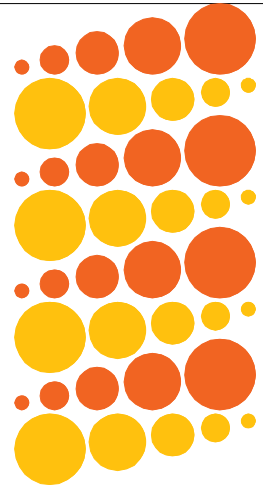


# Improvisation – Composition

## ImproSculpt

Using music technology  
to build a compositionally  
enabled instrument

IMPRO



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- Jazz education, vibraphone
- Artistic research project
  - Phd equivalent
  - 3 year full time
  - Artistic documentation
    - <http://oeyvind.teks.no/results/>



# Context

- Composers
  - Schönberg, Cage, Xenakis, Miranda, Cope
- Improvisers
  - Lewis, Bahn, Ingalls, Casserley, N-collective
- Audio synthesis
  - Roads “Microsound”



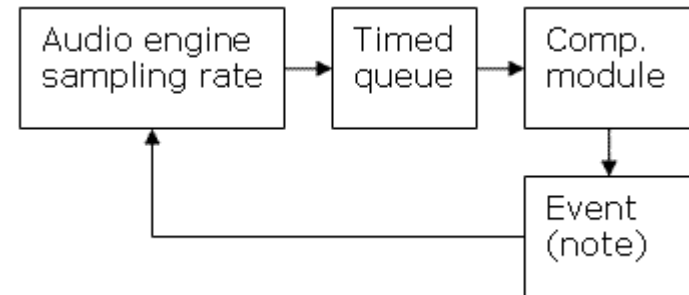
# Overview

- Interaction between improvisational and compositional processes.
- Expand my improvisational palette with the aid of computer software, using composition methods as tools for improvisation.
- The process should be *transparent*
  - It should be possible to follow the process by recognition of source material and transformations.
  - Ear training: *Hearing* a process



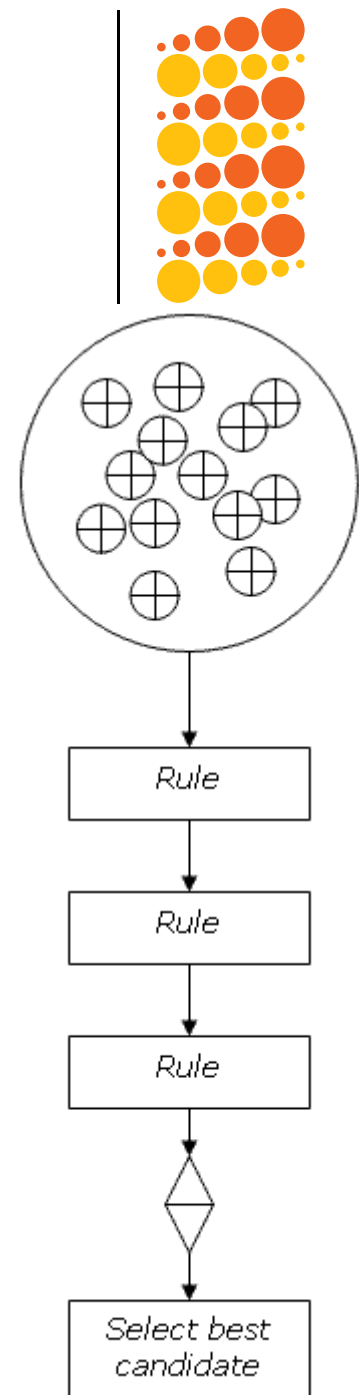
# Instrument, overview

- ImproSculpt4 software
  - Modular architecture
  - Timed automation
  - Composition modules
- Interface
  - Marimba Lumina
  - Lemur
  - Foot controllers



# Composition modules, some details

- Interval melody
  - Serial technique
  - Based on live recorded series
  - Polyphonic adaptation of series
- Interval vector harmonizer
  - Based on live recorded pitch class set
  - Generate several chord alternatives
  - Selection based on voice leading rules





# Use in teaching

- Interval series as an ensemble improvisation strategy, without computer.
- Live sampling and manipulation as a "mirror"
  - Allow the student to interact with her own output
  - Aspects of own performance becomes evident when repeated in new context
  - Stress clear phrasing, building "sentences"
- Audio transformation as compositional gesture
  - Electronic processing methods may inspire acoustic sonic manipulation



# Conclusion

- Methods of improvisation based on compositional methods with live input
- Use of computer to “search & sort” source material
- Live audio manipulation as an improvisation strategy, and as a tool for self reflection upon playing style.
- Enabling subtly new methods of interplay
- Open source software

# Bonus: Feedback instrument



- Ref: Hendrix, Lucier, Di Scipio,
- Audio feedback as a sound generator
  - Slow feedback reduction
  - Select strongest harmonics, attenuate
  - Characteristics of the room and speaker system determine the instrument's timbre
  - Strong coupling of physical movement and produced sound