GoGo Musebots: Generative Music for Robotic Instruments and Human Performers

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Abstract

GoGo Musebots is a co-creation between a generative system and its creator, as well as three improvising musicians. The system is routed in composition rather than improvisation, in that plans are created, then filled in by musical agents (musebots) by creating a score; musebots can edit their individual parts, making decisions based on global structures and local events by other musebots. The final score is translated into MIDI information – to be performed by robotic instruments – and lead-sheet notation – to be performed by humans.

All titles are generated by algorithm, selecting word combinations from Samuel Beckett's *The Unnameable*.

Performed by John Korsrud, trumpet; Jon Bentley, saxophones; and James Meger, bass and mechanical instruments.

1. Genesis

A few years ago I attended a concert of the UK's "emotive, cinematic break-beat trio" GoGo Penguin when I was completing my large-scale generative production "A Walk to Meryton", and I thought "I bet the musebots could do something like that". A few alterations and tweaks to the system and the result was generative music for jazz trio with robotic drums and Disklavier.

Like "A Walk to Meryton", the concept was to create a system that generates a structure of repeating sections each containing unique harmonic progressions and melodies, similar to a typical jazz tune. Human musicians could approach the works as they would any jazz tune notated with a lead sheet, playing the melodies and/or improvising over the chord sequences. The accompanying piano and drums would vary their parts with each performance, controlled by musebots.

2. Musebots

Musebots [1] are independent intelligent agents that generate both an overall musical structure, and then create the details within that structure. The musebots are "intelligent", in that they have learned about their environment and communicate their intentions and coordinate conditions for collaborative machine composition [2].

3. Links

The four generative works can be found here:

1. Then I Was In

https://tinyurl.com/4tzxedz2

2. Clearing Prior to Empty

https://tinyurl.com/3974b4a7

3. Little Grey Wizened Pear

https://tinyurl.com/yz5rakfc

4. No Worse, Little Bounds

https://tinyurl.com/2mtkdrbj

4. References

[1] Bown, O., B. Carey, and A. Eigenfeldt. Manifesto for a Musebot Ensemble. ISEA, Vancouver, 2015.
[2] Eigenfeldt, Arne. Collaborative Composition with Creative Systems. ISEA, Durban 2018.