BRANCH

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1 PROGRAM NOTES

Branch is a live coding étude centered around speech and form. The piece uses the TidalCycles language alongside a tool we developed called SHARP, which provides an interactive, tree-like structure embedded in the text editor to track how blocks of code evolve over time. SHARP opens up new musical affordances centered around quickly switching between previous program states. In addition, SHARP's version trees act as a kind of post-hoc score, leaving a visual trace of the piece's structure as it unfolds. With *Branch*, we attempt to go beyond a simple demonstration of SHARP as a tool and instead create a piece which highlights the interplay between musical form, its visual representation in SHARP, and the sonic material itself. To that end, *Branch* makes use of machine-generated speech based mostly on snippets from the text of Robert Frost's poem "The Road Not Taken". The text is largely decontextualized, and its treatment is somewhat tongue-in-cheek: while the poem's premise centers around not being able to take both paths, we can easily explore as many code paths as we wish. In addition to speech, *Branch* uses audio samples from Freesound, including the sounds of twigs snapping, knocking on wood, and a person stepping on leaves.

2 PROJECT DESCRIPTION

Branch is a live coding piece composed using TidalCycles and an IDE extension called SHARP which helps with visualizing and navigating the program state. We set out to create a piece of music using SHARP with the idea that SHARP should be an integral part of the piece, and not just a tool to make things easier. Because SHARP leaves a visual trace of how a piece unfolds, we decided the piece would focus on musical form. We decided to use speech samples as the main sonic material, as this allowed a dynamic interplay between the semantic content of the speech and how the music was actually unfolding over time. The machine-generated speech samples are (mostly) selected from the text of Robert Frost's poem "The Road Not Taken", because the text was particularly helpful towards that end. As just one example, the words "as far as I could" mark the end of one exploratory branch before that line of thought is abandoned and we return to an earlier program state.

Branch as a live coding étude in the sense that it is a study of speech and form. The speech samples are integrated both semantically and sonically. With regards to semantics, the meaning of the words interplays with the piece's form,

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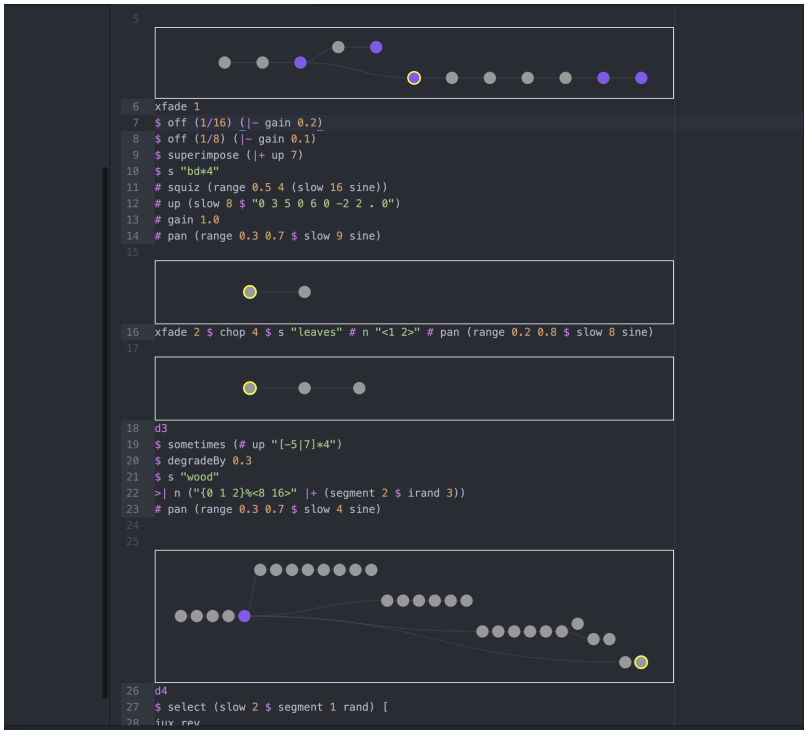

Fig. 1. A screenshot of the text editor during a performance of *Branch*. The version trees act as a post-hoc score, allowing both the audience and the performer to see how the piece has evolved over time. In addition, the interface offers the performer a way to quickly hop to different versions of code.

as previously mentioned. With regards to the actual sounds, the speech is chopped up, altered, and played with, and the result makes up the dominant variation in the overall soundscape.

3 PERFORMANCE NOTES

A performance of *Branch* lasts about 11 minutes and requires a typical setup for a live coding piece: speakers that can connect to a laptop, and a way to project the laptop screen. Although it is presented here without additional visual effects, additional visualizations could be added, so long as the code and version trees are still visible to the audience.

4 MEDIA LINKS

- Video (Google Drive): https://drive.google.com/file/d/1XGLFf-3YuraQZiMxqK4uqjy2UAG7dvcZ/view?usp=share_link
- Video (YouTube): https://www.youtube.com/watch?v=Y3Bhh0HP4xU

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