MIDI.CITI. is an audiovisual software that maps visual cityscape to audio parameters. Elements within the city control complexity of audio loop lines and granular synthesis parameters. As the music develops, the city becomes more vibrant. Audio elements are coded using Chunity, and the visual elements are designed in Blender.
- 4 High-rise Buildings: You can control the complexity density of drum, comping, melody, and bass loops. Each instrument has a probability matrix of playing notes on each beat of a loop. As complexity density increases, the probability of playing sound will increase, yielding more sounds will be played per instrument. Holding the left mouse button and scrubbing vertically on each building will change each complexity density. The window lights correlate to the density.

- Low-rise Building: You can control the gain boost of the above four instruments. Increasing the boost will increase the overall gain. The window lights correlate to the gain.

- Ferris Wheel: You can control the tempo of the music. Holding the left mouse button on the Ferris Wheel will increase the overall tempo. Holding the right mouse button on the Ferris Wheel will decrease the overall tempo. The speed of the Ferris Wheel correlate to the tempo.

- Other elements (street lights, car, airplane, and truck): These elements appear pseudo-randomly as the overall average of complexity density increases. This gives a corresponding visual vibrance to the audio.
Audiovisual Mapping – Moon

- The Red Air Balloon: You can control the grain position of the granular synthesis by moving the red air balloon vertically. The bottom gives a normalized parameter of 0, and the top gives a normalized parameter of 1. Currently the piece is set to have a transition between strings and voice. Increasing the red air balloon height triggers the rabbits to animate and trains to appear on the onset of each measure.

- The Blue Air Balloon: You can control the gain of the granular synthesis by moving the blue air balloon vertically. The bottom gives a normalized parameter of 0, and the top gives a normalized parameter of 1. Increasing the blue air balloon height triggers the rails to appear.

Audiovisual Mapping – UFOs

- The UFOs: There are 8 UFOs each mapping diatonic notes of the music’s scale (currently in Abmin). You can press the keyboards from A to K to trigger onset of each note. Pressing a keyboard gives a corresponding light flicker.
Instructions

- Space: Move from the black scene to the city scene.
- 1 ~ 4: Switch On/Off High-rise Buildings 1 ~ 4.
- 5: Switch On/Off Low-rise Building
- Left-click (Buildings): Holding the left mouse button and moving vertically for high-rise buildings, and horizontally for low-rise building, controls complexity density.
- Left-click (Ferris Wheel): Increase the tempo of the music.
- Right-click (Ferris Wheel): Decrease the tempo of the music.
- M: travel to the moon or back to the city.
- X: Make UFOs appear or disappear and end the piece.
- U: Plays the leading tone if the music is a minor-scale.

If you have any questions, please contact kunwoo@ccrma.stanford.edu.

For a demo video of the piece, refer to the following link:

https://youtu.be/NnWQ5xpKBCk