Specifically, the blue globe on the left controls the hybrid position, enabling changes to the pitches and material properties between the two strings. The green and red globe on the right is used, with the red side for bowing the string and the green side for plucking the string. Three-dimensional gesture control is used for manipulating these parameters through Jitter.

Figure 4. RGB globes for the color tracking.

The three-dimensional gesture control for Modalys String operates as follows: the horizontal value obtained through Jitter adjusts parameters related to bowing, such as the horizontal and vertical positions and the weight. The vertical position value modifies the rosin, access position, and timbre (including constant-loss and frequency-loss).

Finally, the third dimension, the Z-axis, uses the amount of color tracking as its value. This is represented as white on a black screen to provide an instant visualization of the amount.

Figure 5. The degree of color exposure is represented in black and white.

5. DETAILED APPROACH TO IMPROVISING STRATEGIES

The strategies applied for using this patch for live improvisation are as follows:

The green and red globe on the right-hand side is used to control different aspects of the string. Specifically, the red side is designated for bowing the string, while the green side is used for plucking. Since these colors are opposites, the Z-axis value, which reflects the amount of green color, indicates their contrast. As a result, an increase in the Z-axis value of the green color reduces the amplitude of the bowing sound, while the red color, being its opposite, enhances it. This method effectively intercrosses the bowing and plucking sounds by utilizing the color contrast to adjust their relative intensities.

Additionally, by using a MIDI pedal for pedaling, random materials and pitches will appear. These images and pitches will provide visual information that influences the performer in a virtuosic manner.

Specifically, the left hand (blue color globe) controls pitch and material changes by smoothly adjusting the hybrid position.

Moreover, anticipated benefits include precise cues for sound processing (such as AM, RM, etc.), the ability to work with limited scales for specific pitches, and the integration of audiovisual elements with material properties. This approach allows even those who do not know how to play a string instrument to perform immediately, while a deeper understanding of material properties opens up numerous possibilities for creating innovative music.

6. CONCLUSIONS

Modalys is known to be a challenging coding program to handle in live settings. However, efficient coding through color tracking in a controlled environment, with a focus on key parameters, has proposed the possibility of effective performance and creation in live scenarios. This patch is designed to be usable even by those who do not have prior knowledge of Max/MSP/Jitter, or Modalys, and will become even more efficient through optimization and updates on some details.