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Meeting date: May 12, 2025, 12:39 pm

Overview

- In the User Testing Session meeting, participants evaluated a controller mounted on a violin bow designed to enhance musical performance through interaction with audio effects and visual feedback. Users provided insights into the unique feel of the bow interface, noting significant differences from a traditional bow, and feedback was solicited on various functionalities such as a multi-effect pedal, recording capabilities, and a system that responds to playing parameters. Technical difficulties impacted the full demonstration of features, particularly with data transmission and pitch detection. Visual elements, including animated bees that react to sound dynamics and bow position, were discussed as a creative enhancement to performances. The meeting concluded with feedback regarding the need for more immediate responsiveness and smoother software integration, leading to action items focused on fixing existing issues and enhancing user experience.

Notes

- **Testing the Bow Interface (00:01 - 11:49)**

  - The meeting involves testing a controller mounted on a violin bow

  - The interface includes buttons, a slider, and a force sensor that can be manipulated while playing

  - User provides feedback that it feels 'completely different' from a regular bow, especially at the tip

  - The controller is designed so players can click buttons between playing notes rather than simultaneously

  - A demonstration begins with a harmonizer effect and delay functionality

  - Technical difficulties occur with the controller not sending data properly

- **Audio Effects and Recording Functions (12:06 - 24:39)**

  - The interface functions as a multi-effect pedal with customizable effects

  - Current audio effects include harmonizer (octave above/below, fifths) and various delay presets

  - Recording functionality allows players to record themselves and trigger playback

  - Another mode enables the system to act as an improvising partner that responds to the

player

- The system listens for note onset, pitches, dynamics, and attack characteristics

- Technical difficulties prevent full demonstration of the interactive features

- Visual examples are introduced that react to playing parameters

- **Visual Feedback Systems (24:39 - 35:03)**

  - Visual bee animations respond to different playing parameters

  - Bees are designed to move between flowers based on pitch (though not working properly)

  - Visual response to bow position demonstrated as an alternative to pitch detection

  - System also responds to bow speed (bees become more agitated with faster playing)

  - Volume detection works consistently, with more bees appearing during louder playing

  - The 'ecosystem' combines all demos into a comprehensive interface

  - The full system integrates both audio and visual elements in response to playing

- **Creative Applications and Control (35:03 - 45:36)**

  - Slider positions offer varying levels of player control:

  - Position 1: full player control where system directly responds to input

  - Position 2: system becomes less responsive and more autonomous

  - Position 3: system has memory and reacts to player's mood/style

  - Discussion of potential pedagogical applications for students learning bow control

  - Consideration of benefits for performers, particularly electric violinists who need control over effects

  - Value noted for performers who need control over reverb, volume, and effects without a technician

  - User suggests system could add timbral variety and interest to performances

  - Visual feedback creates an interactive performance element that audiences can experience

- **Feedback and Future Development (45:36 - 50:10)**

  - User suggests immediate responsiveness would be more impactful in some contexts

- Discussion about balancing immediate response with surprise elements

- System is designed to give performers control options from total control to collaborative interaction

- Current implementation allows recording snippets of playing that the system improvises upon

- User suggests continuous playing might be better than the current stop-start approach

- Technical challenges acknowledged regarding the multiple software systems required

- The visual component provides an extension to the audio performance and creates a performance partner

Action items
- **Anna Savery**

  - Fix issues with button responsiveness and pitch detection (42:30)

  - Retrain machine learning models to better recognize pitch (42:30)

  - Consider modifying the system to provide continuous playing rather than stop-start responses (48:20)

  - Address software integration issues to make the system less cumbersome (45:36)