Rebecca Larkin
Creative Technologist | Interactive Systems Designer
https://www.linkedin.com/in/relarkin/
www.rebecca-larkin.com

Design Document

I. The following sections reflect the core values that are guiding the design of "The Duet Project" (formerly titled "Duet for Flute and Video Game").

1. Collaborative Exploration (Co-op)
   - *The **Duet** Project*, at its core, is a **duo**. There are two players involved and they are a team.
   - The game as a system is what facilitates bidirectional communication between the players as musical performers.
     - The instrumentalist's role is not to perform next to a game, but to be playing a game by performing on their instrument.
     - Similarly, the game and its PC player are not a backdrop for an instrumental performance.
     - Everyone is an active participant in both game play and music making.
   - This is a dynamic player-driven experience that seeks to transcend traditional gameplay.

2. Low Barrier to Entry (Approachability)
   - The video game element is designed with the goal of being accessible and approachable to anyone who finds the project of interest.
     - In other words, it is not for "gamers" or for "musicians" only. You could be both. You could be neither.
   - I prioritize a clear and intuitive feedback system that allows performers to quickly understand how their actions affect the game.
   - One can play with or without a priori skills in music or game playing and get something out of the experience.

3. Performance as Play
   - By blending live performance with a video game, I emphasize the liveness of both mediums.
   - Structural and experiential parallels are drawn between music improvisation and gameplay.
   - Game mechanics and real-time manipulation of audio and visual components are valued as forms of musical expression.

II. The following provides more details on the design elements and game mechanics.

Please reference the **Mechanics List** for a more detailed description of game mechanics that are referenced in the design notes below.

Setting:
Forest
- Map is split into two halves, divided by a barrier that is traversable.
- Map features a time-of-day system, primarily used for communicating a shared sense of time passing by the two players.

Game Objects:
Trees
- There are five interactable trees (two on one half, three on the other) that are each capable of glowing and have their own BGM layer attached (diegetic).
- Game player proximity to trees determines BGM layer volume.

Lines
- Player instantiates these by colliding with interactable trees.
- Player removes these with a keyboard command.
- Impacts the BGM mix.

Huts
- There are two huts total, one on either side of the map.
- Player entry/exit impact the BGM.
- Triggers reverb live processing on the instrumentalist while within the hut.

Spheres
- Player instantiates these by throwing them.
- The throwing of these objects and their collision with interactable trees afford the player melodic and rhythmic performance ability.

Player
- 1st person perspective.
- Can freely navigate within map boundaries.
    - Two movement speeds: walk & run.
- Can jump.
- Can throw spheres.

Instrument
- Any acoustic pitch-based instrument (like the flute, for example).
- Imparts change upon the forest by performing a recognized pitch motif, resulting in glowing trees and upper BGM layers.
    - Each of the five trees is associated with a pitch motif that activates them.

Mechanics List

Cause	--------->	**Effect**
(I) Pitch motif match	--------->	matching tree glows; attached music (upper) layer sounds.
(G) Cross map barrier/threshold	--------->	change BGM (base layer).
(G) Draw lines	--------->	change BGM (upper layers – attached to trees). *requires (I) Pitch motif match as a precedent.
(G) Cut line	--------->	change BGM (attached upper layer is removed from mix). *requires (G) Draw lines as a precedent.
(G) Hut entry	--------->	change BGM (all layers removed temporarily. Exception: Trees w/lines continue sounding); reverb live-processing impacts (I) until (G) exits.
(G) Throw spheres	--------->	one perc. note of static pitch sounds on (G)'s cue. Affords rhythmic performance.
(G) Sphere collides w/tree	--------->	one perc. note of varied pitch sounds, resulting from (G)'s throw. Y-axis collision point determines pitch. Affords melodic and rhythmic performance in combination with (G) Throw spheres.
(G) Proximity to glowing tree	--------->	change BGM (upper layers) tree music layer volume in mix correlates to player position. *requires (I) Pitch motif match as a precedent.
(G) Proximity to glowable tree	--------->	distance between (G) Throw sphere and (G) Sphere collides is expanded or condensed. Affords rhythmic performance variation.
(G) Walk/Run speeds	--------->	change BGM (upper layers) – adjusts the rate of change in all audio elements that respond to player proximity.

Key:
(I) Instrument [acoustic, e.g., flute]
(G) Game Player