Spyral Narwhals / SoundMaze

Executive Summary

- Purpose:

    Modern Video Games are an incredibly huge market – a market that expands into new
    niches and communities each year. With that said, there currently are very few games
    aimed at visually impaired players. The purpose of SoundMaze is to create an
    application that is fun and accessible to both visioned and non-visioned players.

- Product:

    The most important feature of SoundMaze is our ability to directionalize sound in order
    to direct the player. To accomplish this, a raycasting system is used to decide where and
    how to place sounds. In terms of interface, the game uses the A and D keys to turn, and
    W to move forward.

    The goal of the player is to listen to the various sounds of a level, and find their way to a
    goal point while avoiding a "monster".

- Design:

    Designing the project with the Unity engine presents a problem. Using MVC architecture
    – as we did to an extent – is possible, but very abstracted. The Model is almost
    completely handled by the engine itself, leaving the View and Controller that must be
    designed.

    - VIEW: As our game will have no graphics in the end product, our VIEW consists
      solely of our sound source objects and the sounds effects they play.

    - CONTROLLER:

    Most of our design comes from user stories. By focusing on what elements we felt was
    required for the game, we were able to translate those stories into drawn-out designs to
    implement.

- Verification:

    As this project is a game, much of our verification is done through observation.
    However, we have some implementation tests that ensure the player can move

properly. Additionally, our project runs a quick unit test on our raycasting system when it initially loads. These unit tests mainly check to ensure that our rays are properly tracing their progress through rooms and are destroying themselves properly.

- Conclusion:

    The prototype we have created is very promising. The next phase of development would be to go into beta, where we would begin Quality Assurance (QA) testing with visually-impaired players. The backbone of the game has been created, but to make it something truly great will take a huge amount of QA testing and fine-tuning.