491 Weekly Status Report 2

2/8 - 2/15

Group 15

Project: Cryen

Client: Dr. Randall Geigar

Advisor: Dr. Chen Degang

Team:
- Justin Shaver - Meeting Facilitator
- Thomas Frye - Scribe
- Will Pigg - Lead Hardware
- Chandler Davis - Lead Software
- Daniel Bohlke - Test Engineer
- Caleb Hendrickson - Test Engineer

Weekly Summary

Our main objective for this week was to come up with a basic design prototype. Each team member was tasked with taking the brainstorming ideas from the past faculty meeting and our own ideas and possibly combining with designs we researched to come up with a possible design prototype. Each team member was also tasked with completing sections of the project plan; however, that will not be due until next meeting. We also spent extensive time researching existing solutions along with producing a powerpoint to present our design prototype to our adviser and client during the next faculty meeting.

Past Week Accomplishments

- **Justin Shaver**

- ○ Interviewed three potential users of the end product of our design. Asked them potential features and functions they would like to see in our design:
    - ■ Ability to interface with a MIDI controller - this could be achieved by including a MIDI in and out and handle the MIDI sound signal in the onboard sound processing.
    - ■ Keep the device into a singular unit - this is the approach we are leaning towards anyways, just reaffirms our idea.
    - ■ Ability to save and load effect/pedal presets along with layers in the looper - this is one of our main designs points that we would like to prioritize.
  - ○ Project timeline:
    - ■ Grouping components of project into definable categories and assigning them to team members that will be the primary developer.
    - ■ Creating an itemized list of goals and deliverables that will be required for the project.
    - ■ Producing gantt chart for the project plan section.
- **Thomas Frye**
  - ○ Researched existing solutions such as guitar pedals and guitar loopers:
    - ■ Analyzed potential pitfalls or shortcomings.
    - ■ Meet with a guitarist and discussed equipment functionality and demonstrations.
    - ■ Picked out specific products that have desirable features.
  - ○ Produced a sketch of a potential design solution that included some features of existing solutions along with original ideas.
  - ○ Researched audio connections hardware such as inputs and outputs and analyzed feasibility of some features.
  - ○ Powerpoint format and content for upcoming faculty meeting.
- **Will Pigg**
  - ○ Produced block diagram of our current design prototype. Shows inputs and outputs through the devices in our design along with functionality.
  - ○ Researched potential hardware solutions that could be used in the hardware component of our design prototype.
  - ○ Planning out schedule to develop the device hardware of our design.
  - ○ Sketched potential design prototype along with more detailed hardware solutions.
  - ○ Powerpoint format and content for upcoming faculty meeting.
- **Chandler Davis**

- ○ Researched existing solutions with a focus in guitar pedal designs. Used previous knowledge and experience.
  - ○ Sketched a potential design prototype with annotations of each components and functionality.
- **Daniel Bohlke**
  - ○ Developed testing plan for project plan section.
  - ○ Included validation testing and requirements for potential design testing along with a timeline.
- **Caleb Hendrickson**
  - ○ Researched existing solutions in guitar equipment.
  - ○ Developed use case diagram for project plan section.
  - ○ Worked on literature review section for project plan section.

Pending Issues

No current immediate issues other than normal scheduling conflicts and establishing expectations and a timeline, etc.

Individual Contributions

Name	Individual Contributions	Hours	Total
Justin Shaver	- Interviewed potential users of the end product - Developing gantt chart/project timeline - Establishing goals and deliverables	3	5
Thomas Frye	- Proposed design prototype - Researched existing solutions	3	5
Will Pigg	- Developed block diagram - Researching possible solutions for hardware components	4	6
Chandler Davis	- Proposed design prototype - Researched existing solutions - Worked on rules and ethics section in project plan	2	4
Daniel Bohlke	- Developed test plan - Determined possible validation tests	3	5

Caleb Hendrickson	● Developed use case diagram ● Researched existing solutions ● Worked on literature review section in project plan	4	6

Comments Extended for Discussion

Controller
- What will be used as the onboard controller?
  - Has to have the ability to interface with many devices - many inputs and outputs - what hardware will be required?
  - Latency - the controller will have to be able to handle extensive sound processing very quickly to keep up with the user.
  - Possibly a Raspberry Pi.

Plans for Upcoming Week

- **Justin Shaver**
  - Complete project timeline:
    - Gantt chart.
    - Goals and deliverables.
    - Assigning tasks.
- **Thomas Frye**
  - Compete content in powerpoint to present design prototype for upcoming faculty meeting.
  - Develop problem statement for project plan section.
  - Continue researching existing solutions.
  - Create design diagram for current design prototype.
- **Will Pigg**
  - Continue researching hardware solutions.
  - Finalize block diagram for project plan section.
  - Complete content in powerpoint to present design prototype for upcoming faculty meeting.
  - Develop bill of materials for project plan section.
- **Chandler Davis**
  - Develop rules and ethics for project plan section.
  - Develop risk and challenges for project plan section.
- **Daniel Bohlke**

- ○ Finalize test plan for project plan section.
- ○ Finalize validation tests and requirements for project plan section.
- **Caleb Hendrickson**
  - ○ Finalize use case diagram for project plan section.
  - ○ Continue working on literature review for project plan section.

Summary of Weekly Advisor Meeting

No meeting occurred this week due to scheduling conflicts. We rescheduled our meeting earlier for next week due to time constraints.